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ORIGINAL LECTURES.

CARTWRIGHT LECTURES.

ON THE EXPERIMENTAL METHOD IN MEDICAL SCIENCE.

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LECTURE III.

NERVOUS DEGENERATIONS, AND THE THEORY OF SIR CHARLES BELL.

MR. PRESIDENT AND GENTLEMEN: It is now a little over forty years since the beginning of an investigation which has produced most important changes in the study of the nervous system. It relates to the alteration of structure taking place in nerves after they have been divided by a transverse section.

The manner in which attention was first directed to this point is as follows. It had long been known that when a nerve was cut at any point, the immediate effect was a suspension of its functional activity. If it were a motor nerve which had been divided, voluntary motion was abolished in the parts below; and if a sensitive nerve, there was loss of sensibility in the skin where it was distributed. But this interruption of the nervous activity was not always permanent. In some cases the power of motion or sensation would return in the affected parts; and the ends of the nerve were then found to be reunited by a cicatricial tissue, in which there were connecting nerve-fibres of new formation. This reunion of a divided nerve, and the mode in which its structure and functions were re-established, formed the subject of many laborious investigations.

The observations in question were mainly directed to the cicatrix between the ends of the divided nerve. This was naturally supposed to contain the key of the whole secret, and consequently received most of the attention given to the subject. But in 1839 Nasse[1] extended his examinations to the nerve-fibres at a lower level. He divided the sciatic nerve in frogs and rabbits; and, after waiting from two to five months, found that the fibres in the separated portion of the nerve had become altered in structure. They were of irregular form, granular, and semi-opaque. They often contained what seemed to be minute fat-globules from the degeneration of their myeline, and they appeared to undergo in this way a gradual atrophy. Nasse's observations were almost immediately followed by those of Gunther and Schön,[2] which were to the same effect. They were made on the divided sciatic nerve in rabbits from twelve hours to one year after the operation; they showed that a nerve, after a few days' separation from its nervous centre, loses its irritability, so that its galvanization will no longer produce contraction in the muscles below; and that this loss of irritability coincides in time with the granular degeneration of its fibres.

All these researches were connected with the question of the re-establishment or regeneration of the nervous continuity; and they did not extend for any great distance below the point of section. Thus far, whenever observers use the term "regeneration," as applied to divided nerves or nerve-fibres, they mean the formation of new, connecting fibres in the cicatricial tissue. It was supposed that when this reunion took place, the altered fibres below were restored to their normal condition, and the nerve in this way enabled to resume its functions. The fact of degeneration was considered as of secondary consequence, as limited in extent, and often of temporary duration.

But ten years later the subject was taken up afresh by Augustus Waller, and was treated by him in a manner so original and so thorough that it at once assumed a character of the first importance. Waller began his professional life in England as a practitioner of medicine, but he had a strong taste for independent research, and, after being for a time Professor of Physiology in the medical school at Birmingham, he transferred his residence to the continent, where he remained for most of his subsequent life and where the greater part of his scientific work was accomplished. For the anatomical study of muscular and nervous fibres he employed the tongue of the living frog. This gave him a great advantage, since the extensibility and transparency of the organ enabled him to examine its internal parts in their normal place and condition, undisturbed by the contact of artificial reagents. He applied this method to the observation of nerve-fibres, and the change which they undergo after division; and thus followed their gradual degeneration, from day to day, under the microscope.

One of his first and most important results was that the degeneration in the fibres of a divided nerve, below the point of section, extends through their whole length, reaching to its ultimate ramifications. After division of the glosso-pharyngeal nerve in the neck, he saw its degenerated fibres in the tongue, and even in the papillæ of the mucous membrane. He also established the fact that in a nerve once divided, the degeneration of the affected nerve-fibres is final; and that when the nervous functions are restored, it is by a true process of regeneration, that is, the growth of new fibres throughout the separated portion of the nerve.

But the principal merit in Waller's discovery was something additional. He did not rest content with its value as an acquisition, he made it serve as an instrument. He saw in the degeneration of divided nerve-fibres a means of investigation, which he at once put to further use. A nerve is often made up from fibres of different sources. It receives branches of communication from other nerves, and in the inosculating filaments between two different trunks, there may be fibres going or coming in either direction. In the nervous trunks and branches, these fibres are for the most part hopelessly intermingled, and it is impossible to follow them for any distance by ordinary dissection. But by dividing, in the living animal, a nervous trunk or branch near its source, Waller could afterwards trace its degenerated fibres, however erratic their course, or whatever their distribution. He communicated his results to the French Academy of Sciences,[1] under the title: *A New Method for the Study of the Nervous System; adapted for Investigating the Anatomical Distribution of the Nerves.*

The first application of the new method was in the frog's tongue. This organ is supplied by two nerves,

[1] Archiv für Anatomie, Physiologie, und Wissenschaftliche Medicin. Berlin, 1839, p. 405.

[2] Ibid., 1840, p. 270.

[1] Comptes Rendus de l'Académie des Sciences. Paris, 1851. Tome xxxiii., p. 606.

corresponding respectively to the glosso-pharyngeal and the hypoglossal. After dividing one of these nerves in the neck, and allowing time for its subsequent degeneration, Waller could determine the course and destination of all its fibres. He followed them throughout the frequent anastomoses of the two nerves, when the altered fibres could always be distinguished from the normal ones around them, and the two kinds were so different in appearance, that, as he expressed it, "there could be no doubt whatever as to the origin of either."

These results were obtained by repeated and accurate experimental investigation, and they have been fully corroborated by subsequent observers down to Vulpian,[1] in 1866, and Ranvier,[2] in 1878. According to Vulpian, six weeks after the division of the sciatic nerve, in a dog, no unaltered nerve-fibres could be found in the muscles of the corresponding foot; and in similar experiments by Ranvier on the rabbit, the terminal ramifications of the nerve in the muscles of the leg contained only nerve-fibres with disorganized and granular myeline.

The advantages in Waller's mode of procedure were so obvious and so readily verified, that it was soon generally adopted, and received the name of the "Wallerian method." It at once yielded, in the hands of its author, much interesting information. After division of the pneumogastric nerve on one side, in cats, at the level of the larynx, granular degeneration was found throughout its peripheral fibres, except in those joining it below, from the inferior cervical ganglion; all of which remained normal. Above this junction the nerve was wholly disorganized; below, it contained a mixture of fibres, normal and degenerated. It was thus made evident that the inosculating branches between the two nerves are given by the sympathetic to the pneumogastric, and not from the pneumogastric to the sympathetic.

Physiologists had often been at variance as to the origin and character of the *chorda tympani;* that remarkable filament of communication between the facial and lingual nerves. Was it a branch of the facial nerve, going to the lingual? Or was it an offshoot from the lingual, returning to join the facial? This point was determined by the method of section. Waller introduced his stylet into the middle ear, and divided the filament where it crosses the membrana tympani. Fifteen or twenty days afterwards, nearly all its fibres were degenerated between the point of section and the lingual nerve; that is, in the direction of their peripheral distribution. The chorda tympani was consequently shown to be a branch of communication *from* the facial nerve *to* the lingual.

In this way, many doubtful questions of nervous distribution received their solution. The granular degeneration of the divided nerve-fibres became an artificial aid to the anatomist, of the same value as the injection of minute bloodvessels with an opaque pigment. Even a single disorganized fibre could be distinguished among a crowd of normal ones; and in a mixture of the two, the numerical proportion of each could be fairly determined.

But Waller did not remain satisfied with this success. He determined to apply the same method which he had used for the nervous trunks and branches to the study of the nerve roots;[3] and in doing so, he opened a new chapter of nervous physiology, and greatly enlarged the field of his operations.

The history of these experiments is so well known that they only need to be stated in a few words. Waller had already shown that if a spinal nerve were divided at its exit from the vertebral canal, all its peripheral parts suffer degeneration. Motor and sensitive fibres are alike involved, and can be traced, in their disorganized condition, to their ultimate termination in both the muscles and the integument. On continuing the same mode of investigation within the vertebral canal, if the anterior root only were divided, the motor fibres alone degenerated in the trunk and branches of the nerve, while its sensitive fibres remained normal; if the posterior root were divided outside its ganglion, the sensitive fibres of the nerve degenerated, and the motor fibres were unaffected; and in both cases the portion of the nerve root still connected with the spinal cord preserved its normal structure. But if the posterior root were divided above the situation of its ganglion, two remarkable consequences followed. First, there was no degeneration of the nerve whatever outside the ganglion; and, secondly, that portion of the nerve root separated from the ganglion, but still united with the spinal cord, suffered complete degeneration.

These effects were repeatedly observed, under varied conditions, until there was no doubt in regard to them. In the frog, when both roots of a sciatic nerve were divided above the level of the ganglion, there was, of course, equal loss of motion and of sensibility in the paralyzed limb; but while all its muscular nerve-fibres degenerated, its sensitive fibres, distributed to the skin, exhibited no alteration whatever, even at the end of two months. Similar experiments on warm-blooded animals turned out in the same way. In dogs and cats, Waller utilized for this purpose the exceptional position of the second cervical nerve, the two roots of which remain distinct in these animals, until after emerging from the intervertebral foramina. He could thus operate on the nerve roots without opening the vertebral canal, and by this means he verified Magendie's discovery, that section of the anterior root destroys the power of motion; and that of the posterior root, the power of sensibility. But he demonstrated furthermore, that when both roots are severed above the level of the ganglion, all the motor fibres of the nerve degenerate, and all its sensitive fibres remain sound.

It is, therefore, evident that the immediate loss of action in a divided nerve, and its structural degeneration, are two independent phenomena, having nothing to do with each other. A motor nerve, when cut, ceases to excite voluntary motion, not because its fibres are incapacitated by degeneration, but because their physical continuity is broken at one point; and a sensitive nerve, under like conditions, can no longer communicate with the sensorium for the same reason. The proof of this is that, if we galvanize the motor nerve below the point of section, it at once calls out the action of its muscles; and a similar stimulus, applied to the sensitive nerve above its point of section, will be transmitted to the brain and produce the effect of a sensation.

But after some days a different condition shows itself in the peripheral part of the divided nerve. Its fibres are then unable to react under artificial stimulus, and their galvanization no longer produces muscular contraction. This is owing to their progressive degeneration, which requires time for its development, but which at a certain stage destroys the functional activity of the nerve-fibres. Simple paralysis of motion and sensation is consequently the *immediate* result of division of a spinal nerve. Its degeneration, with loss of irritability, is a subsequent and *secondary* result. The independence of the two is especially manifest in Waller's ex-

[1] Leçons sur la Physiologie du Système Nerveux. Paris, 1866, p. 243.

[2] Leçons sur l' Histologie du Système Nerveux. Paris, 1878. Tome ii., p. 349.

[3] His second communication to the French Academy, in 1852, was entitled "Experimental Researches on the Structure and Functions of the Ganglia." Comptes Rendus de l'Académie des Sciences. Paris, 1852. Tome xxxiv., p. 524.

periments on the spinal nerve roots; for, when both are divided above the level of the ganglion, the motor fibres of the anterior root become degenerated throughout their distribution in the paralyzed parts; but the sensitive fibres, from the posterior roots, remain everywhere sound in the integument of the same region.

From these facts Waller concluded that the two sets of nerve-fibres had different centres of nutrition; that the motor fibres of the anterior root were dependent for their structural integrity on connection with the spinal cord; while the sensitive fibres of the posterior root depended on their connection with the spinal ganglia. He was fully justified in claiming that his results were unequivocal, and "calculated to throw a new light on the relations of the nervous system."

For Waller's communications on this subject to the French Academy, he was awarded in 1856 the Montyon Prize of Experimental Physiology, by a committee consisting of Flourens, Rayer, Serres, Milne-Edwards, and Bernard. In reporting the decision of the committee, the Chairman, Bernard, begins with the following words: "The discoveries usually presented to us are of two different kinds. In some the facts have been already to a certain extent anticipated, and are mainly serviceable in their new form by increasing the precision of our knowledge, and by elucidating subjects previously obscure. The others, on the contrary, are unexpected. The principal feature in them is their novelty; and they enlarge the boundaries of science, not merely by the solution of particular questions, but still more by the new ideas and suggestions which they originate. It is to the last of these two categories that the present essay belongs."

It soon appeared that the committee were not mistaken in their estimate. The immediate result of Waller's researches was the discovery of the so-called "centres of nutrition" for nerve-fibres of different kinds. The existence of these centres of nutrition was fully demonstrated; although it was not quite plain, and has not even yet become so, in what way their influence is exerted. But there was also the additional discovery that the degeneration of divided nerve-fibres may take place in two opposite directions. It may be *centrifugal*, that is, from the point of section to the periphery; or, it may be *centripetal*, that is, from the point of section towards the spinal cord and brain. This fact afterwards became the most prolific source of further investigation.

Up to this point, Waller's experiments had been confined to the spinal nerves and nerve roots. In his last communication to the French Academy,[1] he goes a step further and traces the course of similar degenerations in the cord itself. He divided the spinal cord, in a dog, between the third and fourth lumbar vertebræ. After twenty days the cord was found to be reunited at the line of section. But above the section the posterior columns were disorganized for the space of about two vertebræ; while in the inferior segment the same columns, as well as the posterior nerve roots, were normal throughout. The anterior nerve roots, on the contrary, were completely degenerated for the first three pairs below the section; the alteration diminishing gradually in amount for the fourth, fifth, and sixth pairs. Thus, there may be, within the columns of the cord, as well as in its nerve roots, centripetal or centrifugal degenerations affecting exclusively particular nervous tracts.

This discovery corresponded with certain pathological observations in man made about the same time by Türck, and communicated by him to the Academy of Sciences at Vienna.[2] They were cases in which post-mortem examination revealed an old, morbid deposit in the brain, together with a structural alteration of the spinal cord on the opposite side. This alteration consisted mainly in an abundance of abnormal, granular cells, occupying the tissues of the cord and resembling those met with about the morbid deposit in the brain. The principal feature of the alterations in question was that they occupied definite longitudinal tracts, the rest of the cord being normal. By examining successive sections, at different levels, it became evident that from the lesion in the brain to the lower end of the spinal cord only certain bundles corresponded in situation with those which could be demonstrated by dissection in normal specimens of the cord, after hardening in alcohol.

Observing this correspondence, in certain cases, between the degenerated tracts and parts already known, the author was led to apply the same means of observation to the study of anatomical relations not so well understood. The attempt proved successful. The first fact which it brought out, was a distinction between the anterior and posterior segments of the lateral column. No such distinction can be shown by ordinary dissection, most of the nerve-fibres in both segments running in a direction parallel with each other, and between origins and terminations too distant to be traced. But in some of the cases mentioned, the morbid alteration of the lateral column was found only in its posterior part, the anterior part remaining sound; and this difference was so constant, in sections made at various levels, as to leave no doubt that there must be some anatomical distinction between the two segments of the column, extending through the greater part of its length.

It was also seen, in these cases, that, on approaching the upper end of the cord, the degenerated tract shifted its position forward and inward, and, at the medulla oblongata, crossed into the anterior pyramid of the opposite side. Thence it extended upward through the pons varolii, where the distinction was extremely evident, the transverse bundles of the pons being free from alteration, while its longitudinal bundles were deeply affected. It appeared, therefore, that the degenerated tracts had been invaded by a special alteration, confined to their own limits, and extending continuously, from the seat of the brain lesion, through the crus cerebri, the pons, and the anterior pyramid of the same side, and thence through the posterior part of the lateral column on the opposite side, quite to the lower end of the spinal cord.

This showed that there was a longitudinal tract of nerve-fibres, reaching for long distances in the cerebro-spinal axis, and having, so to speak, its own special centre of nutrition; and that when this centre of nutrition was disturbed or disorganized by local lesion, the subsequent degeneration might extend throughout the tract in question, while others in its immediate contiguity remained sound. The cases observed by Türck were accompanied by more or less hemiplegia; and while the brain lesion, as well as the degeneration of the pons and anterior pyramid, were, as usual, on the opposite side, that in the spinal cord was on the same side with the paralysis. Everything showed the degenerated portions in the spinal cord to be continuous with the opposite anterior pyramids and their extension in the crura cerebri, and consequently to represent the motor tracts of the cerebro-spinal axis. But while Türck followed the crossing of these tracts at the decussation of the pyramids, he also showed that in certain cases their crossing was incomplete; that is, although the bulk of a degenerated anterior pyramid crosses at the level of the decussation, and reappears below in the lateral column of the opposite side, a remnant of its fibres continue their downward course for some distance, on the same side. These direct col-

[1] Comptes Rendus de l' Académie des Sciences. Paris, 1852. Tome xxxv., p. 301.

[2] Sitzungsberichte der Kaiserlichen Akademie der Wissenschaften. Wien, 1851, p. 288.

umns, visible more or less constantly in the cervical portion of the cord, are still known by the name of the "Columns of Türck."

But his most important results were those indicating the difference, in anatomical connection, between the anterior and the posterior parts of the lateral column. These two parts were distinguishable from each other by the granular deposit with which one was infiltrated while the other remained normal; and the deposit reappeared with such constancy at the same spot in successive sections, and crossed so distinctly at the decussation of the pyramids, as to show that it followed the course of an associated bundle of nerve-fibres. As this bundle represented, in the cord, the continuation of the crus cerebri and anterior pyramid above, the whole tract, from end to end, afterwards received the name of the "pyramidal tract." The first indication of the exact locality of this tract, in the lateral columns, was derived from the sections of Türck.

The same author made an incidental observation, afterwards seen to be very important, in regard to degenerations from local lesion of the cord itself. They were instances of paraplegia from compression or disorganization of the spinal cord at one point. In these cases the portion of the cord above the lesion, while nearly free from granular degeneration, nevertheless contained single degenerated tracts, always identical in situation, extending upward to the medulla and pons. But these tracts were not those found degenerated after a brain lesion, and the latter were entirely sound in the above-mentioned cases of injury to the cord. If one portion of the spinal cord, therefore, can degenerate in consequence of a lesion situated above it, another and an entirely different portion may be affected by degenerations coming from below.

So far, the knowledge of degeneration within the spinal cord had been mainly acquired from pathological observations in man. But about ten years ago Goltz, in Strasburg, undertook a series of investigations on the functions of the lumbar portion of the spinal cord, especially with regard to its influence on the sexual and urinary organs. His experiments were performed on young dogs by dividing the cord transversely at the lower end of the dorsal region, and then preserving the animals long enough to study the permanent effects of the operation. By adopting various improvements in the selection of animals, the operative procedure, and the subsequent treatment, he became very successful. The cord was divided without serious injury to the vertebral column or the external parts. Dogs of the proper age and organization were not dangerously affected by the operation, sometimes taking food within the first twenty-four hours, and generally regaining their natural appetite in a few days. The wounds healed in two or three weeks, and some of the animals were preserved several months, remaining paraplegic, but otherwise in good condition.

This was a valuable material for the study of degenerations in the spinal cord; and it was utilized for that purpose by Schieferdecker,[1] the assistant of Goltz, who was already familiar with the history and condition of the animals employed.

On examining microscopic sections of the cord in these cases, the granular degeneration of the pyramidal tracts was recognized. It was present in every instance, and had invariably taken a descending course, from the point of section to the lower extremity of the cord. This portion of the spinal cord, therefore, became altered after section, in the same way as a divided spinal nerve, that is, from the centre towards the periphery; and the degeneration of the pyramidal tract, whether it be due to a cerebral lesion, or to compression or transverse section of the cord itself, follows the same direction.

On the other hand, when a similar degeneration is met with in the posterior columns of the cord, it is always ascending. We have now the experience of Charcot,[1] to corroborate the earlier assertion of Türck, that such posterior degenerations invariably extend from the point of injury or disease upward towards the brain, and never in a downward direction. By this means the ascending and descending degenerations of the spinal cord were established with the same certainty as the centripetal and centrifugal degenerations of the nerve roots; and like them, were shown to occupy separate tracts, easily distinguishable from each other.

These facts greatly increased the confidence of physiologists in the value of degenerations as indicating the continuity and destination of nerve-fibres. It was evident from the first that a divided nerve-fibre degenerates because of its severance from some special nerve centre; and, once cut off from this centre, it becomes affected throughout its remaining length. When we see, in the spinal nerves, complete degenerations strictly limited to the ramifications of a single trunk, and similar alterations in the spinal cord equally confined to particular tracts, we can hardly refuse the conviction that these tracts also consist of continuous nerve-fibres following a common direction. Waller's experiments on the nerve roots show that when such a group of fibres meets a ganglion or centre of gray substance interposed in their course, then degeneration does not pass this point. Either the injured fibres receive a further accession of nutritive energy from the ganglion, or else they terminate in it ssubstance, and are then replaced by new fibres originating from its gray matter. This gives a special significance to the fact observed by Charcot[2] in regard to disease of the pyramidal tracts. These facts are manifestly the channels for voluntary motion in the spinal cord. The paralysis caused by either their morbid alteration or their experimental division shows that they are really the paths followed by voluntary motor impulses from the brain to the anterior nerve roots. But descending degenerations of the pyramidal tract, however complete in the spinal cord, do not usually extend to the motor nerves or nerve roots. This is easily explained on the assumption that the fibres of the pyramidal tract terminate in the gray substance of the anterior horn, while those of the anterior root have an origin of their own at the sam point. The nerve root, therefore, degenerates only when divided beyond its emergence from the anterior horn.

A further study of the posterior columns led to the additional discovery of two different kinds of degeneration, as well as to a distinction between different parts of these columns. Hitherto, the morbid alteration of nervous tracts had appeared only as e consequence of a local lesion, in either the ne es, spinal cord, or brain, extending upward or dowr ard from its origin, as if propagated in certain directi ns along the natural route of the nerve-fibres. These alterations of structure were, therefore, known as "secondary degenerations," because resulting from some primary affection in a different locality. But it appeared that certain tracts in the spinal cord might also be the seat of primary degenerations, originating within their own substance independently of lesions elsewhere. As these alterations often followed a similar course to those of secondary origin, occupying only their own tracts or system of fibres, they received the name of "systematic degenerations."

[1] Archiv für Pathologische Anatomie und Physiologie. Berlin, 1876, Band lxvii., p. 542.

[1] Leçons sur les Localisations dans les Maladies du Cerveau et de la Moelle épiniere. Paris, 1880, p. 247.

[2] Leçons sur les Maladies du Système Nerveux. Paris, 1877. Tome ii., p. 219.

The posterior columns of the cord were liable to both secondary and systematic degenerations. But these two affections occupied different regions, thus showing an anatomical distinction in the posterior column, like that already established between the front and back parts of the anterior column.

In the posterior column of the cord the inner part, next the median line, is a narrow band, visibly marked off from the remainder, in the cervical region, by a slight furrow on the surface. This is the *funiculus gracilis*, or the "column of Goll." At the medulla oblongata it diverges from the median line in an oblique upward direction, forming on the inner border of the restiform bodies the so-called "posterior pyramids." The columns of Goll are the seat of the ascending degenerations noticed by Türck. When they are affected in this way, their alteration extends unbroken from its starting-point, often quite to the level of the medulla oblongata; whence it is inferred that they are composed throughout of continuous fibres.

But the remainder of the posterior column is affected by degenerations which have a different form and different results. This portion is included between the column of Goll and the posterior nerve roots, and forms the outer part of the posterior column. It has not received a distinct name, but is important, owing to its connection with locomotor ataxia. It is regarded as made up of comparatively short fibres, originating and terminating in succession along the cord; for the reason that its secondary degenerations are never propagated to any considerable distance,[1] extending at most only two or three centimetres above their origin. But it is liable to systematic alterations of structure, mainly sclerosis, invading a large portion of its extent; and when such alterations occur, they are accompanied by symptoms of locomotor ataxia, never produced by structural disease in other parts. According to the observations of Charcot,[2] the columns of Goll may be completely degenerated without causing any signs of ataxia, while sclerosis of the outer part of the posterior columns is always accompanied by ataxic symptoms; and these symptoms are in proportion to the extent of the degeneration.

Lastly, the anatomical study of nervous tracts by the aid of secondary degenerations, has been carried into the brain itself. There is already a reasonable certainty of the extension of the pyramidal tracts through the anterior pyramids, the pons varolii, and the crura cerebri; and the fibres of the crus cerebri are manifestly succeeded by the diverging expansion of the internal capsule and the corona radiata. These expansions are, beyond question, for the most part, means of communication between the cerebral convolutions and the ganglia at the base of the brain; while the fibres of the crus cerebri connect the ganglia with the spinal cord below. But besides these interrupted communications, are there also direct fibres, running continuously from the motor centres in the cerebral cortex, through the corona radiata and internal capsule, into the pyramidal tract? The centres of motion about the fissure of Rolando might produce their effect when galvanized, either through the intervention of the cerebral ganglia, or more directly by means of continuous fibres. Such tracts of direct fibres have been sometimes imperfectly recognized in the examination of hardened specimens; but they have never been clearly demonstrated by this method, owing to the complicated interlacement of fibres in the upper part of the internal capsule. Their existence is mainly inferred from the course of descending degenerations in this region. According to Charcot,[1] destructive lesions of the cortex, in the anterior and posterior central convolutions, give rise to degenerations in the white substance which pass downwards through the internal capsule, crura cerebri, anterior pyramids, and lateral columns of the cord. These degenerations may be found without accompanying lesion of the cerebral ganglia; and they are not produced by morbid alterations in other parts of the brain than those about the fissure of Rolando. Similar observations, made during a period of fifteen years, point with much significance to a continuity of fibrous structure throughout this tract. If we remember the uniform progress of discovery already derived from these investigations, first in the nerves, then in the nerve roots, then in the columns of the spinal cord and the medulla oblongata, it is not presumptuous to expect from their future prosecution a corresponding success in the more difficult exploration of the brain.

The study of nervous degenerations has already borne fruit of great value. Like other researches of a similar kind, it was at first a matter of purely scientific interest, without any apparent bearing on the treatment or even the pathology of disease. But it has grown in importance with every additional observation, and it is now acknowledged to be an indispensable aid in investigating the morbid affections of the nervous system. It has extended our anatomical knowledge far beyond its previous limits. It has demonstrated the existence of nervous connections which could hardly have been detected in any other way. It has shown the relation between various forms of paralysis and the altered structure of particular nervous tracts; and it seems likely to yield still further results before its capacity is exhausted. It began with the cicatricial tissue between the ends of a divided nerve, and it has now reached the intricate region of the white substance of the cerebral hemispheres.

(To be continued.)

[1] Charcot, Leçons sur les Maladies du Système Nerveux. Paris, 1877. Tome ii., p. 248.

[2] Ibid., p. 11. Leçons sur les Localisations dans les Maladies du Cerveau et de la Moelle épiniere. Paris, 1880, p. 259.

[1] Leçons sur les Localisations dans les Maladies du Cerveau, pp. 156, 166.

[2] Read before the [Medical Society of the State of New York, February 8, 1882.

ORIGINAL ARTICLES.

ON THE PHYSICAL DIAGNOSIS, BY MEANS OF PERCUSSION AND EXPLORATION BY PUNCTURE, OF PERITONITIS

WITH AND WITHOUT PERFORATION OF THE ALIMENTARY CANAL, AND THE EMPLOYMENT OF ASPIRATION IN CASES OF PERFORATING PERITONITIS.[2]

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OF the various causes of acute diffuse peritonitis, traumatic and puerperal cases being excluded, the most frequent is perforation of the alimentary canal. It is highly important to recognize this condition at the bedside, in individual cases, for several reasons. One reason relates to the prognosis. The prognosis is extremely unfavorable if there be intestinal or gastric perforation. Another reason has reference to the use of opium in the treatment. In all cases of acute peritonitis, opium is the "sheet-anchor" in the treatment; but there is added a special object in the use of opium if perforation exist. Recovery is possible only by such a degree of induced arrest of peristaltic movements as will allow adhesion to take place at the point of perforation. The practice of

the future may furnish another reason. It may be that laparotomy will be found to be a life-saving operation in some cases. Opening the abdominal cavity, closing the perforation by proper surgical means, and washing out all irritating matters, it is not highly improbable will be a method of treatment sanctioned by its successful employment.

Correlatively it is of importance to be able to exclude perforation, at the bedside, in cases of acute peritonitis. One object of this paper is to invite attention to the proof against perforation afforded by a physical sign, namely, hepatic flatness on percussion. The exclusion of this cause is a ground for a favorable prognosis; it is to be considered in the use of opium in the treatment, and, at a future time, perhaps in deciding upon laparotomy.

Under normal conditions, flatness on percussion extends from about the sixth rib on the mammary line to the site of the lower border of the liver, that is to the level of the false ribs. In cases of perforation of the stomach or of the intestine, gas in greater or less quantity escapes into the peritoneal cavity. The exceptions, if there be any, must be extremely rare. Gas within the peritoneal cavity, the patient recumbent on the back, will separate the anterior surface of the liver from the thoracic wall. This is probably true without exception, provided there be not adhesion of the entire anterior surface of the liver as a result of peritonitis, and adhesion sufficient to prevent the entrance of gas between the liver and the chest-wall is rare. The presence of gas between the anterior surface of the liver and the chest-wall gives rise to tympanitic resonance on percussion. I assume that in cases of peritonitis with perforation, the normal hepatic flatness is always supplanted by tympanitic resonance. This statement is shown by experiments on the cadaver and by clinical observations.

The points which I make are these: If perforation be the cause of the peritonitis, there is more or less gas in the peritoneal cavity; a stratum of gas will then separate the liver and the chest-wall, giving rise to tympanitic resonance on percussion, and, hence, if there be persistence of the normal hepatic flatness, perforation as the cause of the peritonitis may be excluded.

It is only within a short time that my attention has been specially directed to this proof against intestinal or gastric perforation in cases of peritonitis. During this time, however, the following cases under my observation have exemplified its practical application.

In the case of a middle-aged man, seen with Prof. Erskine Mason, of New York, and Dr. Furman, of Tarrytown, the history and symptoms pointed to perforation of the appendix vermiformis of the cæcum. The pain originated in the right iliac fossa; resistance to pressure was felt in this situation, and the abdomen was notably tympanitic. Moreover, the general symptoms denoted so much gravity that a fatal termination was considered as highly probable. Hepatic flatness on percussion, however, was always found, and the recovery of the patient may be considered as rendering it almost, if not quite, certain that there was not intestinal perforation.

A woman of middle age, seen by me in consultation with Dr. Lewis and Dr. Hutchison, of Brooklyn, presented the symptoms of acute diffuse peritonitis, with enormous tympanitic distention of the abdomen. Hepatic flatness was well marked, and on this fact perforation of the alimentary canal was excluded. Death took place within twelve hours after my visit. The autopsy showed the recent passage of gall-stones through an ulcerated opening into the duodenum. Two gall-stones were found in the small intestine. There was no gas in the peritoneal cavity.

In the case of a young women, a patient of Dr. Burrall, of New York, acute diffuse peritonitis was developed in the course of typhoid fever. There was moderate tympanites in this case. Hepatic flatness was found on percussion. The case ended fatally, and there was no autopsy. That intestinal perforation had not taken place, was a fair inference, irrespective of the hepatic flatness, from the absence of the gravity of symptoms which perforation occasions, and from the fact that death did not place for at least a week after the occurrence of the peritonitis.

So far as these few cases go, they show that hepatic flatness on percussion is proof against perforation of the alimentary canal as the cause of an existing acute peritonitis.

A larger collection of cases is desirable, and a motive in submitting a paper at the present time is to interest others in testing the value of this physical proof.

Assuming that hepatic flatness on percussion is proof against perforation of the alimentary canal in cases of peritonitis, it cannot be assumed that tympanitic resonance over the hepatic region is always proof of perforation. The possibility of the colon being pressed upwards, so as to lie between the anterior surface of the liver and the chest-wall, has been demonstrated. But this occurrence is not necessary in order to explain hepatic tympanitic resonance on percussion. It happens not very infrequently that when the transverse colon is much distended with gas, tympanitic resonance is conducted upwards, so as to meet the pulmonary resonance. This conduction upwards of tympanitic resonance from the colon renders the evidence afforded by percussion of the site of the lower margin of the liver very unreliable. If reliance were placed upon percussion, it would be necessary sometimes to conclude that the liver is wanting in its normal situation. This conclusion was actually reached in a hospital case under my observation. The patient had cirrhosis of the liver, with some hydro-peritoneum, and a greatly enlarged spleen. It was reported to me as a case of transposed abdominal viscera, the liver being situated on the left side; and the tympanitic resonance in this case extended upwards to the upper margin of the liver, where it became merged into the pulmonary resonance.

It is not an uncommon error to infer diminution of the size of the liver by measuring, on the mammary line, the distance between pulmonary and tympanitic resonance. On the other hand, per-

cussion is not to be relied upon for determining enlargement of the liver, for the reason that the upper boundary of tympanitic resonance is no criterion for locating the lower margin of the organ. Here, however, we have a resource against the unreliability of percussion, namely, palpation. The sense of resistance to finger-pressure may be relied upon in ascertaining how far the liver extends below the false ribs, and the pulmonary resonance on percussion is reliable as indicating its upper boundary.

In order to show that the presence of air in the peritoneal cavity causes hepatic flatness to disappear, and gives rise to tympanitic resonance over the liver, the following experiment on the cadaver was made by Dr. Stone, House Physician of the Third Medical Division, Bellevue Hospital, at my request, and in my presence. It is proper to state that the experiment was suggested by Dr. Corwin, senior assistant of the division.

The body of a man, six hours after death, presented considerable tympanitic distention of the abdomen. Hepatic flatness was limited on the mammary line to a space about an inch in its vertical diameter. Air was injected into the peritoneal cavity through a small-sized cannula, which was attached to Bowditch's aspirating instrument. The trocar was introduced near the umbilicus. The hepatic flatness quickly disappeared, giving place to tympanitic resonance.

The body of a woman, fourteen hours after death, presented complete collapse of the abdominal walls, and flatness on percussion below the sixth rib. There was considerable rigidity of the abdomen. Air was readily injected into the peritoneal cavity, causing distention and tympanitic resonance over the whole abdomen. The hepatic flatness at once gave place to tympanitic resonance.

In each of these experiments it was difficult to remove the air through the small cannula by pressure over the abdomen sufficiently to restore the hepatic flatness on percussion.

In order to obtain positive proof of the presence of gas within the peritoneal cavity, whenever, in cases of peritonitis, tympanitic resonance extends over the region of the liver, there can be no objection to an exploratory puncture with a small trocar and cannula. The puncture should be made within the hepatic region, lest, possibly, if made elsewhere, the intestine might be wounded. The escape of gas through the cannula is easily perceived by *the touch* and by the odor. Air injected, and allowed at once to escape, acquires an intestinal odor. If desirable, the gas could easily be collected by attaching to the cannula an oiled-silk bag; or it might be aspirated and collected in a glass receiver.

The exploratory puncture thus supplies what is lacking as regards proof of perforation afforded by percussion, and by means of percussion and the exploring trocar, in cases of peritonitis, it may be positively determined whether or not perforation exists. If hepatic flatness on percussion remain, there is no perforation of stomach or intestine. If, on the other hand, tympanitic resonance be found to extend over the region of the liver, all doubt as to the existence of a perforation is removed by an exploratory puncture in that region. It is hardly necessary to add that care is to be taken, in introducing the trocar, not to penetrate the liver; not that the wound will do harm, but because the peritoneal gas will not then escape through the cannula. The liver has not been penetrated if, after withdrawing the stylet, the end of the cannula which has been introduced be freely movable.

A late writer in a standard work on practical medicine (*Ziemssen's Cyclopædia*), says of acute inflammation of the peritoneum, "the only difficult question is whether the peritonitis be with or without perforation. To decide this point, we ought not to rely on any one single well-established physical sign, but make an accurate digest of the entire group of phenomena. Notwithstanding, the diagnosis in some cases must remain undecided." (Vol. viii., p. 208.)

By means of the simple methods submitted in this paper, as it seems to me, the question, whether the peritonitis be with or without perforation, is divested of all difficulty, and may always be decided positively.

It is assumed, in this paper, that the presence of gas within the peritoneal cavity in cases of peritonitis, always denotes perforation of either the stomach or intestine. The question may be asked, is not gas sometimes a result of chemical changes in morbid products within the peritoneal cavity, perforation not existing? Without denying the possibility of gas being thus derived, it is, as I believe, a warrantable statement that the instances, if there be any, are so rare that they may practically be disregarded.

Recovery from perforating peritonitis requires, first, agglutination by means of fibrous exudation, and, next, permanent adhesion, by means of proliferating tissue, to some part with which the intestine or the stomach is in contact at the site of the perforation. It is obvious that the presence of gas within the peritoneal cavity must interfere with this requirement for recovery. Hence arises the inquiry whether the removal of this gas may not prove to be an important measure in the treatment.

Aspiration is probably the safest and best method for the removal of the gas. When air is injected into the peritoneal cavity through a small cannula, its entire removal is not easily effected even by firm pressure over the abdomen. The entire removal is shown by the disappearance of tympanitic resonance over the liver, and this resonance was found to remain after firm pressure, in the experiments on the cadaver which I have related. Moreover, pressure on the abdomen sufficient to remove the gas in cases of peritonitis, would perhaps do more harm than the presence of the gas. Of the different aspirators, I should prefer either my adaptation of Davidson's syringe to thoracentesis, or Bowditch's instrument, for the reason that they are more readily under control, as regards the suction-force, than the aspirator of Dieulafoy. The puncture made by a small trocar causes so little pain that it might be repeated whenever the gas accumulated within the peritoneal cavity; or the cannula, closed by a stop-cock, might be allowed to remain, and aspiration repeated as

often as the resonance over the liver denoted the presence of gas. The aspiration might include the withdrawal not alone of gas but of effused liquid. The removal of the latter is desirable, inasmuch as it may separate the site of the perforation from an adjacent part, and thus prevent closure of the perforation.

In order to demonstrate the possibility of the removal of gas from within the peritoneal cavity by aspiration, the following experiment on the cadaver was made, at my request, by Dr. Thatcher, junior assistant, Bellevue Hospital: A trocar was introduced in the region of the iliac fossa and attached to Bowditch's aspirator. The injection into the peritoneal cavity of the air contained in the syringe twice, was sufficient to substitute tympanitic resonance for flatness in the hepatic region. Afterwards the trocar was introduced over the liver, and, by suction with the instrument, the tympanitic resonance was made to disappear and give place to the hepatic flatness which existed before the injection of air.

THE SIGNIFICANCE OF PAIN REFERRED TO THE EAR.[1]

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IT is notoriously difficult to estimate accurately a subjective symptom, but pain takes a high place in the important testimony given by the patient himself. It brings with it so many objective signs in the expressions of the face, and the gestures, and in the play of the emotions, that we all attach much importance to it as a diagnostic symptom. When we have made all due allowance for the nervous disposition which exaggerates the least pain until it is described as unbearable; when we have noted the delicacy or pusillanimity of temperament which tolerates no discomfort, we still find in pain an important indication of the true state of the organ supposed to be diseased. The symptom of pain in the ear is no exception to this rule. We may find in it, perhaps, much that is significant and suggestive. If the Society will grant me their indulgence for treating of a somewhat commonplace subject, I will venture to formulate the suggestions which are made by the discovery of the existence of pain in the ear. It is the symptom commonly known as earache.

1. *Foreign Bodies in the External Auditory Canal.*—The entrance into the external auditory canal of a living animal, such as an earwig, or the generation of a maggot in the same part may, and generally does, cause severe pain. The diagnosis of the cause in this instance is easy. Ocular inspection will determine it in a few seconds. The means of relief are simple. Syringing with warm water, or filling the canal with fluid, will readily remove the insect. As to the maggot, it will be necessary to kill the grub by the use of such an agent as Labarraque's solution, or by the vapor of chloroform, before it can be removed by syringing.

Inanimate foreign bodies, which are generally placed in the ear by children, or irresponsible adults, do not usually cause pain, unless they have been pushed down into the canal, so as to press upon its sensitive integument or upon that of the drumhead. Nor is there any danger unless this has occurred. This is a hint to us to avoid haste and severe means in removing such an offender.

Impacted wax, in a few cases, causes severe pain in the ear. The diagnosis here is also perfectly easy, and the means of relief ample. In the majority of cases, inspissated cerumen, while a foreign body, may cause tinnitus and impairment of hearing, it does not produce pain. In the cases which I have seen where pain occurred, there has been an inflammation of the integument of the canal, so that the wax has been glued, as it were, to it; or it has pressed upon the drumhead. This pressure upon the membrana tympani, from a plug of hardened material, may not occur until the wax has remained in the canal for months. I have long thought that the cause of impacted cerumen is to be found in an inflammation of the canal, and that the inflammation, if such there be, causes a swelling and adhesion of the epidermis, perhaps of the integument itself, to the cartilage or periosteum of the canal. It is in these cases where the inflammatory origin is decided, that I have seen pain particularly prominent as a symptom. As I have already indicated, this particular condition is a very rare one.

2. *Furuncles and Diffuse Inflammation of the External Auditory Canal.*—The pain from furuncles or from diffuse inflammation, is very often extremely severe. But it may usually be distinguished from that caused by inflammation of the middle ear, even without ocular inspection, although I am far from advising any one to thus venture a diagnosis.

Unfortunately, pain from an inflammation of the canal, is not so easy of immediate relief as is pain from the more deeply-seated and dangerous lesion. An inflammation of the canal may extend to the auricle and to the superficial tissues of the mastoid process. An inflammation of the connective tissue and perichondrium of the auricle, is extremely painful, and I know of no adequate means for its immediate relief. It is fortunate that it is rare.

But even when this occurs, the pain from an inflammation of the canal is not to be compared with that from a true periostitis of the mastoid process, or to that from an inflammation of the little tympanic cavity. In rare cases it is probable that the inflammation of the canal becomes periostitis by direct extension, and in such instances the pain will be very severe, but the means of relief are sufficient. An incision which divides the inflamed periosteum, will give it in a few moments. A periostitis of the canal cannot be distinguished by the character of the pain from a periostitis arising from an inflammation of the middle ear. The extension from this part is as dangerous as the extension from the tympanic cavity, and, as I have said, the pain from furuncles or diffuse inflammation of the canal is not so easily relieved as the same symptom arising in the course of the more serious inflammation of the tym-

[1] Read before the Medical Society of the State of New York, February 9, 1882.

panic cavity, Eustachian tube, and the mastoid cells.

The probable consequences of an inflammation of the canal, either diffuse or circumscribed, are not serious; and we may not be troubled as to the future of the patient's hearing, even though we are not able to promptly relieve the pain. The means upon which I rely for the *mitigation* of the pain from furuncular or diffuse inflammation of the canal are, 1, the warm douche, and the use of steam; 2, poultices applied behind and in front of the ear, and *in* the meatus; 3, incision of the inflamed tissues; 4, the administration of some preparation of opium.

Large poultices enveloping the auricle, as has been long since shown, are apt to set up chondritis, a tedious disease of the auricle, and they may also cause granulations to rise in the auditory canal. Sometimes the warm water acts like a charm to quiet all the pain from this form of inflammation. It should be used by means of a fountain syringe, or Fayette Taylor's douche, or any other siphon arrangement which may be at hand. The ordinary syringe will never be of any value in the application of the douches. The stream must be continued without interruption for a long time, in order to mitigate pain. When the warm douche fails, poultices, applied as I have stated, will sometimes accomplish very much; and when all these fail, a free incision through the swollen tissues down to the bone in the osseous canal, and well into the cartilage in the cartilaginous, will cut off the severity of the attack. But in many of the tedious cases all these agencies but mitigate the symptoms until the proper conditions of life replace the improper ones under which this disease originated, and tonics, change of air, and time have wrought a cure unmarked by relapses. It is an interesting clinical fact that leeches are usually of no avail whatever in furuncles of the auditory canal, and of very limited value in diffuse inflammation, important as their use is in subduing the pain of severe inflammations of the middle ear.

I have carefully studied all that is claimed for sulphide of calcium in subduing pain in this part of the ear, and I have occasionally administered it to prevent frequent relapses of furuncular inflammation, but as yet I see no reason to change my opinion that the exhibition of such drugs as a means of relief for pain caused by local swelling and tension in an inaccessible part, inaccessible as to the relief of tension, is simply a *renaissance* of the exploded tenets of one of the sects in medicine.

Pain in the ear from external inflammation is much more rare than from a morbid process in the middle ear. From the character of the pain alone it would be very difficult to make a diagnosis, and yet it may be said, in general terms, that pain from inflammation of the middle ear may be distinguished from that from boils or from that *rara avis*, otalgia, by its general characteristics of intensity. The pain from the serious disease of the middle ear is often agonizing and overwhelming, continuing without interruptions of composure, while that from furuncles and otalgia is comparatively bearable.

3. *Disease of the Middle Ear, that is to say, of the Tympanitic Cavity, Eustachian Tube, and Mastoid Process is a prolific cause of Pain.*—This pain, when intense, is a serious symptom. The well-being, often the life, of the patient, may be involved in its proper interpretation. If it be intense and arise from pressure in the tympanic cavity or the mastoid cells, from tension of the infiltrated periosteum, or from pressure by swelling of the Eustachian tube, no drugs, not even doses of opium, or its preparations, much less any of the recently recommended medicines, such as sulphide of calcium and pulsatilla, will be of any avail at all, until nature or mechanical means, such as leeches and the knife, and inflation of the stopped-up chambers have evacuated the pus or mucus, disgorged overfilled bloodvessels, or divided the tensely stretched membranes.

Slight pain is readily relieved by the warm douche and by poultices. Those who believe in the mysterious virtues of drugs in preventing maturation may add them to the mechanical means in these cases. But in the mild forms of middle-ear inflammation they are unnecessary, and in the severe ones wholly useless. Confinement of the patient to a warm room, promotion of the moisture of the skin, perfect tranquillity of the body, will be found necessary adjuvants in the treatment of pain from disease of the middle ear, while these things will accomplish very little, if anything, in relieving that from boils.

The means for determining the origin of pain in the ear are ample, and yet as we all know, perhaps, the conclusion is often hastily reached that the disease from which it arises is one of the canal and not of the middle ear. A serious disease is thus mistaken for one which is unimportant by comparison. It may be, in the opinion of your speaker, taken almost for granted that severe earache, in ninety out of every one hundred cases, is caused by inflammation of the middle ear. I would adopt means for its relief as follows: 1, the warm douche; 2, leeches. These will scarcely ever fail in cases seen within one or two hours of the beginning of the pain. Sometimes, however, nature anticipates any ordinary surgical assistance and relieves the case by the bursting of the enlarged bloodvessels through the membrana tympani within an hour of the beginning of the attack. [Otitis media hæmorrhagica.]

But even if the pain has existed for days, the proper action of leeches will cut it off, often before the leeches have dropped from the tragus or the mastoid, while the warm douche will complete the cure.

I have been speaking of severe pain, of pain which prevents sleep even though powerful anodynes are used, pain which causes the bravest man to groan with agony or writhe with restlessness in this unintermittent disease. The pain from periostitis of the mastoid is also relieved as readily as that of tension of the tympanic cavity, if seen early, by leeches, by poultices; and if seen late, by division of the tissues down to the bone.

There is much disease of the middle ear, active though it may be, which is not characterized by great pain, and in which the beneficent power of time and nature will accomplish a great deal. The wise observer will carefully discriminate between

severe cases and those which need mild treatment. But that form of disease characterized by the pain which I have endeavored to describe, will sometimes, nay, often, work destruction of the organ of hearing, and even cause the loss of life, if not relieved at once. When it occurs it cannot be trifled with, and, as yet, no means have displaced those known as local antiphlogistics.

4. *Otalgia.*—Pain in the ear of a severe type, and lasting but for a second at a time, sometimes occurs in the course of chronic non-suppurative disease of the middle ear. The symptom is not an important one. Such pains do not interfere with the usual health of the patients unless they are anæmic or hysterical. What may be called typical otalgia, that is, pains in the ear without apparent lesion, rarely occurs. When it does, it may depend upon carious teeth, or upon rheumatism or syphilis.

In closing this essay upon the significance of pain in the ear, I venture to state, whatever æsthetics may owe to Mr. Oscar Wilde, humanity remains under great obligation to his father, the great Irish Baronet, who, some thirty-five years ago, first plainly drew the line between the extremely rare affections of the ear, which may be denominated nervous, and those which are of an inflammatory character. He plainly indicated to us the importance of leeches, and of division of the periosteum for the relief of serious pain in the ear.

The debt which we owe him was increased by that due to Hermann Schwartze, of Halle, for having revived the operation of paracentesis of the membrana tympani in cases of over-distention of the tympanic cavity. These means remain, as yet, unsupplanted for the relief of the symptom which is generally caused by what may be called mechanical influences. He who discards them in the proper cases, does so at the peril of the integrity of the organ of hearing, perhaps even to the life of his patient; true though it be, that one may escape from even such peril after weeks of unnecessary suffering, with neither damage to his hearing nor loss of life.

MEDICAL PROGRESS.

HYDRATE OF CHLORAL IN ACUTE GASTRO-ENTERITIS IN CHILDREN.—Dr. ADOLPHE KYELLBERG (*Nordesk Med. Arkiv.*, Bd. IV.) concludes that the principal cause of difficulty in treating this affection is the great irritability of the stomach, and that hydrate of chloral serves better than any other drug to check the violent vomiting by which all medicines and foods are rejected, and besides soothing the child, will often help to arrest diarrhœa. He administers it in the form of an injection, preferably after the bowels have been moved, in doses of 25 to 30 cgrms. for children of from five to six months old, and from 50 to 60 cgrms. to children of twelve to fifteen months of age, only a dessert-spoonful of fluid being used. The enemata may be repeated two or three times daily, if required, the doses also being increased, if they appear to be too small, or it may be associated with other drugs, such as iced champagne or brandy for the vomiting, opium internally or as an enema for the diarrhœa, warm baths with mustard for albuminuria, if present, and stimulants for collapse. Finally, to increase the effect of the chloral, the author is accustomed to add 1 grm. of the *tr. thebaica* to the enema, and when stimulants are required, 5 to 15 drops of Hoffman's anodyne.—*Journ. de Méd. de Paris*, Dec. 24, 1881.

EXTRA-UTERINE PREGNANCY: EXPULSION OF THE FŒTUS BY THE RECTUM: CURE.—On the 19th of December, 1879, Dr. BULTEAU was called to a woman suffering from terrible abdominal pains and continuous vomiting; her face was contracted, pulse small, and abdomen distended and painful in the left iliac fossa. The patient was thirty-three years old, had generally been in good health, and had had a miscarriage six years previously, since when her menstrual periods had been irregular. A diagnosis of pelvic peritonitis was made, and the symptoms disappeared under treatment with opium, an irregular tumor, however, remaining in the left iliac fossa. The general health continued to fail, vomiting persisted, and it was thought at one time that there existed a cystic sarcoma of the uterine appendages. Several months later the patient had an abundant sanguinolent diarrhœa, after which the tumor diminished considerably in size, and one month later, a femur of a fœtus of eight months was passed by the anus, and at different intervals all the other bones of the fœtus escaped by the same means. Ten months after the commencement of these deliveries the patient had entirely regained her health.—*Union Méd. du Nord-Est*, Oct. 15, 1881.

THE TRUE VALUE OF NERVE-STRETCHING IN THE TREATMENT OF THE PRINCIPAL SYMPTOMS OF LOCOMOTOR ATAXY.—At the congress of German naturalists, held in Salzburg, last September, the question of the value of nerve-stretching in locomotor ataxy was thoroughly discussed, and all were agreed that, after a transient stage of amelioration, the disease advanced unchecked. This opinion has since been confirmed at the meeting of the Verein für innere Medicin of Berlin, held on the 31st of October, when Drs. Bernhardt, Leyden, Litten, Goldammer, and Israel cited numerous facts which placed the conclusion beyond doubt, that elongation of the great nerve-trunks in locomotor ataxy can lessen the darting pains for a few weeks, and renew cutaneous sensibility and equilibrium; but the pains, driven from their original seat, appear in the trunk, the loss of equilibrium is soon more marked than before, and the skin again loses its sensibility.—*Deutsche Med. Woch.*, Nov. 19, 1881.

AN IMPROVED VAGINAL TUBE.—J. HOCKS (*Centbl. f. Gynäkol.*, No. 19, 1881) draws attention to the occurrence of uterine colic with sickness, etc., from the use of the vaginal douche, which he attributes to the introduction of either air or fluid into the uterine cavity, in cases where, either from retroversion or gaping of the os, the end of the vaginal tube may have accidentally lain directly opposite the opening of the cervix. He recommends the use of a spindle-shaped tube, which at its farther end divides into two smaller tubes, these, however, becoming again continuous, thus inclosing an oval space about one and a half inches long. The injection escapes by means of perforations on the inner aspects of these smaller tubes, and the end of this instrument, if introduced into the cervix, will effectually plug it. In regard to the use of the douche during menstruation, the writer states that by using such a tube, and thus preventing the possibility of fluid entering the naturally gaping cervix, and by carefully assimilating the temperature of the water to that of the body, not only is there no danger, but better results are obtained than during the inter-menstrual period.—*Edin. Med. Journ.*, Jan., 1882.

TEMPERATURE OF ACUTE ABSCESS.—M. ASSAKY has recently undertaken some experiments under Prof. Gosselin's direction, to determine by direct measurement, the temperature at the seat of suppurative inflammatory action of acute abscesses in one hundred and twenty-three cases, and compare it with the local temperature of other parts of the body. M. Assaky found:

1. The temperature in the interior of an acute subcutaneous abscess, wherever located, or whatever the age or constitution of the patient, varies from 99.5° to 101.3° Fahr.

2. The cutaneous temperature over the seat of the abscess is always from 0.9° to 4.5° higher than that of a corresponding point on the opposite side of the body.

3. The localized elevation of temperature tends to disappear as the abscess approaches cure: the course of the temperature of the abscess is independent of that of the general body-temperature.—*Gaz. Méd. de Paris*, Dec. 3, 1881.

PARAMYOKLONUS MULTIPLEX.—Under this name Prof. FRIEDREICH describes (*Virchow's Archiv*, December, 1881,) a case of clonic contractions of a number of symmetrical muscles of the lower and upper extremities. The patient, a man aged fifty, the subject of cirrhosis of the right lung, presented the following symptoms. There were short, quick, rapidly-recurring contractions of the biceps, triceps, and supinator longus of the arms, and the vastus rectus femoris, adductors, biceps femoris, and semitendinosus of the thighs. No other muscles of the extremities or trunk were involved. The contractions were not fibrillar, but affected the entire muscle, causing it to swell and harden. They were not always forcible enough to move the limb, though sometimes the arm would be flexed by the biceps, or the hand supinated by the action of the supinator. The contractions were not rhythmical, but separated by irregular, brief intervals. Though symmetrical muscles were affected, each contracted independently. When in action, a sound could be heard with the stethoscope resembling the first sound of the heart. The frequency and intensity of the contraction varied in a quiet state, 10 to 20, in a most active, 40 to 50 per minute. Occasionally they would cease for one-quarter to one-half an hour. Sometimes the contractions would follow each other with great rapidity, and the muscle would pass into a state of tetanus, lasting for a few seconds and accompanied by pain. As a rule, they were strongest and most frequent when the patient was at rest in the evening, and would at times cause pain enough to prevent sleep. Not infrequently he was aroused from sleep by a painful cramp of the muscles of the legs, which would then be drawn up towards the abdomen. During sleep the movements stopped. When patient made voluntary movements or used the limbs actively, the contractions ceased, so that they did not interfere with his work. The power of the affected muscles was not impaired. Electrical excitability, to both currents, normal; mechanical excitability also natural. On the other hand, the reflex excitability was decidedly increased. Even exposure of the limb to the cool air intensified the contractions. Pinching the skin or other stimuli acted in the same way. No ankle clonus, but the patellar reflex was greatly exaggerated. All of these phenomena, the spontaneous contractions and the increased skin and patellar reflexes, were much more marked on the right side. Sensibility normal. No vaso-motor or secretory disturbances. No atrophy of affected muscles. No cerebral or papillary symptoms.

Patient attributed the trouble to a severe fright which he had received five years before; he became pale and had a sensation of rigidity of the entire body, which recurred in a quarter of an hour. Fourteen days after he first noticed the twitching, which gradually became more intense, and lasted up to the date of his admission, on 29th of April, 1880. Under galvanism the frequency and intensity of the movements rapidly abated, and in a few days entirely disappeared.

Prof. Friedreich believes that a local muscle or nerve affection could be excluded, and explains the symptoms on the view of increased excitability in certain groups of nerve cells in the anterior horns of gray matter of the cord; not of the nature of an inflammatory state, but rather a functional disturbance.

With regard to the etiology, it had no connection with the chronic lung trouble, but would appear to be directly related to the fright, so that it may be regarded as a remarkable and peculiar form of *fright neurosis*.

SALICYLATED STARCH IN ECZEMA.—KERSCH (*Wiener Med. Blatt.*, No. 1, 1881) strongly recommends salicylated starch in the treatment of eczema. It is prepared by gradually mixing small quantities of pure starch with a 2 to 3 per cent. alcoholic solution of salicylic acid. When the starch has settled, the quantity of the solution present should be sufficient to furnish a layer over it. The residual solution should then be poured off, the salicylated starch pressed in stout muslin, and dried at a temperature of 176° Fahr. The eczematous patches are first deprived of their scales by the use of a 2 per cent. solution of carbolic acid and potash soap, then dried with absorbent antiseptic cotton, subsequently moistened with a 2 per cent. alcoholic solution of salicylic acid, and then thickly covered with the salicylated starch. The remedy, even allowing for Kersch's enthusiasm, seems to have acted well, and is worthy of more extended trial.—*Dublin Journ. of Med. Science*, Nov., 1881.

VENOUS CONGESTION AND CIRRHOSIS OF THE LIVER IN DIABETES.—M. LECORCHÉ draws the following conclusions from an essay on this subject:

1. Congestion of the liver is usually, if not invariably, found in the course of diabetes; it is dependent upon the excessive functional activity of this organ, which itself is the cause of the disease.

2. Atrophic cirrhosis of the liver exists merely as a coincidence with diabetes, and can be only indirectly due, according to the author, to the congested state of the organ. He believes it to be due to the large amount of liquid consumed by diabetics.—*L'Union Méd.*, Dec. 29, 1881.

KOUSSO RESIN.—Prof. ARENA (*Prak. Arzt., No. 3*) states, in regard to the action of fresh and old kousso as a vermicide, that this substance loses its activity by keeping, and this is due to the alteration in the resin, which is the active principle. The fresh resin is green, with a somewhat bitter and unpleasant taste. The old resin is yellow, and without bitterness.—*Practitioner*, Jan., 1882.

FORCED ALIMENTATION IN PHTHISIS.—Dr. DESNOS points out a number of inconveniences or accidents which may follow the use of forced feeding as recommended by M. Debove, of which the following is a summary.

The method can produce intolerance of the stomach and painful cramps, which may be sufficiently severe to necessitate the abandonment of forced feeding. On the other hand, this intolerance may, in certain cases, be overcome by introducing the fluid very slowly and intermittently, and in smaller quantities than usually advised. It is advisable to select the periods when fever is absent for the administration of the food, and in cases where milk causes uncontrollable diarrhœa, another article of food must be selected.—*Bull. Gén. de Thérapeutique*, Jan. 15, 1882.

THE MEDICAL NEWS.

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OF MEDICAL SCIENCE.

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SATURDAY, FEBRUARY 11, 1882.

NATIONAL PUBLIC HEALTH LEGISLATION.

I. THE ADULTERATION OF FOOD AND DRUGS BILL.

AMONG the four thousand odd hundred bills which have been already introduced into the present Congress, there are several which are of special interest to physicians and sanitarians. At present we propose to remark upon but one of them, reserving others for future examination.

We say but one, although there are three bills relating to the adulteration of food and drugs noted in the Record, namely, H. R. 1039, introduced by Mr. Hardenbergh, of New Jersey; H. R. 1080, introduced by Mr. Flower, of New York; and S. 649, introduced by Senator Miller, of New York. A very slight examination, however, shows that these bills are identical in all respects, each being, in fact, a copy of the bill prepared and presented towards the close of the last Congress under the auspices of the National Board of Trade.

The essential features of this bill may be summed up as follows: It forbids the introduction of adulterated food or drugs into the United States or their transport from one State to another. It forbids the manufacture or sale of adulterated food or drugs in any territory, in the District of Columbia, or in any fort or navy-yard or other place under the exclusive jurisdiction of the general Government. It leaves to each State the matter of regulating the manufacture or sale of adulterated articles within its own borders. The scope of the bill will be found in the abstract of it given in another column.

It is provided in the bill that the National Board of Health shall, from time to time, fix the limits of variability permissible in any article of food, drug, or compound, the standard of which is not fixed by any national pharmacopœia. It will be seen from this proviso, in connection with those in the seventh clause of the bill, that the National Board of Health is to fix the standard of composition in cases where this is not done by the pharmacopœia, and that the operation of the law is made as it were tentative, and given a certain amount of elasticity by avoiding the fixing of details and leaving them to be changed by the Board as circumstances require. This is still further provided for by section 5 of the bill.

The first question to be considered in regard to this proposed legislation is, is there sufficient need for it? It certainly seems to us that there is. The investigations made under the direction of various Boards of Health, State and National, show that the art of adulteration, and selling things under false names, is practised to a very large extent. So far as food is concerned, this matter is of more importance to honest dealers and manufacturers who have to compete with adulterated goods, and to contend in foreign markets against the bad reputation of our products produced by such adulterations, than it is from a sanitary point of view. But so far as relates to the adulteration of drugs, all physicians know the uncertainty of their prescriptions depending upon the uncertainty of the strength and purity of the materials used in compounding them. The evil has long been recognized, and is on the increase. It is true that in our large cities, through the organization of pharmacists, much has been done to remedy it, and that the physicians in such cities can always obtain reliable preparations by selecting his apothecary; but it is also true that a vast amount of weak, impure, and adulterated drugs is annually disposed of in this country upon physicians' prescriptions, and that the results from this are sometimes dangerous—the more so because they are often the unsuspected cause of failure to secure the hoped-for results from remedies ordered. Nor does it seem to us probable that this matter can be corrected by State laws alone, although undoubtedly these are also necessary.

Granting the necessity for a United States law, the bill we have described seems well calculated to secure its purpose. There must be some authority to fix the standards of purity and to exercise discretion, so that there shall be no unnecessary interference with legitimate industry. The National Board, with the aid of the expert advice which it would call in, seems the best authority available for the purpose; it would act with a due sense of responsibility, and may, we believe, be trusted to proceed cautiously and tentatively in the matter. It is not probable that the law will be found satisfactory in all particulars; but, at all events, it will be in the

power of the Board to prevent it from doing harm until the changes which experience may show to be necessary shall have been made.

ANIMAL VACCINATION.

IT has been stated that the protection afforded by vaccination against small-pox is much less complete in recent years than it was in the days of Jenner. Prof. Cameron, of Dublin, has recently called attention to the fact that, in the epidemics of Rotterdam, Montpelier, and Edinburgh, occurring between 1818–23, the mortality among a large number of vaccinated persons attacked was only about 1 in 330 cases; while among the many cases treated in the London hospitals during the epidemics of 1870–79, 1 in every 10 of the vaccinated died. So, also, in the epidemics in the United States in the years 1871–73, the results of the operation were not as satisfactory as might have been expected, although animal vaccination was then beginning to be practised to a very considerable extent. A careful analysis, made by Prof. Cameron, of over 15,000 cases recorded in London in 1852–67, and at periods between 1871 and 1879, shows a marked falling off in the protective power of vaccination, *as measured by the death-rate.* This falling off in the results has been attributed by the advocates of animal vaccination to the deterioration of humanized virus by transmission through a countless number of subjects. The virus is thought to have become attenuated to a degree that has deprived it of much of its original protective influence. To remedy this assumed defect, and restore to the operation the fullest measure of efficiency, it would seem most natural and judicious to return to the original source of the virus, and substitute animal vaccination for the method hitherto almost universally employed, unless provided with virus from lymph or crusts possessing unquestionably the characteristics of true Jennerian virus.

Another reason, of some weight, for the practice of animal vaccination, is to avoid all possibility of transmitting human disease, though authenticated cases of this means of infection are excessively rare.

Animal vaccination is now practised very generally in the United States, but the results of the innovation are not altogether satisfactory. The fault is not with the system, but in its practical application. "Pure and unadulterated" animal virus, judiciously introduced into the system, must confer every possible protection. But the virus supplied from the numerous vaccine farms throughout the country is so often inert or impure from admixture with blood, pus, or other foreign substances, the result of careless or reckless manner of collection and preparation, or, if originally unobjectionable, the uncertainty of its activity when it arrives in the hands of the physician, is so great that confidence in its reliability is apt to be shaken. Resort should, therefore, be made, whenever possible, to virus but few removes from the calf, as being more trustworthy and reliable.

To prevent failure, and to obviate this growing distrust, it would appear incumbent upon the Government or State authorities to organize vaccine farms under their immediate supervision, and this office might, with propriety, be assigned to the National or State Boards of Health. From these sources, a reliable and adequate supply of material could be obtained at all times. If this method were pursued, every possible objection to animal vaccination would disappear, and its advantages would be more universally recognized and applied. The danger of inoculation of human disease, though hardly possible where proper prudence and care are observed, is entirely avoided by the use of bovine virus. A more complete confidence in the operation is established, as is indicated by the greater willingness of the public to have vaccination performed when it is used. Then, again, there need never be any scarcity of supply, as so frequently happens when depending entirely upon the humanized stock.

THE LESSON OF MEMPHIS.

IN another column appears a letter from Dr. R. B. Maury, entitled "Memphis—its Sewers and its Health," which is of much more than local interest. It will be remembered that immediately after the end of the yellow-fever epidemic of 1879 a sanitary survey was made of the city of Memphis, under the auspices of the National Board of Health, by a Commission composed of Drs. Billings, Mitchell, and Folsom, Major Benvaurd, U. S. Engineers, and Col. George E. Waring. This Commission advised a change in the source of supply for the water-works; the introduction of a system of sewerage to discharge into the Mississippi River; a system of subsoil drainage; the keeping the bayous free from contamination; the condemnation and destruction of certain buildings, etc. The system of sewerage has been introduced, but it does not discharge into the Mississippi; it has been turned into Wolf River a few hundred yards below the water-works. The bayous have not only not been kept free from filth, but the sewers have been allowed to overflow into them. Only such subsoil drainage has been introduced as was immediately connected with the sewers laid—an amount altogether insufficient, as Dr. Maury remarks, to secure good drainage. And the source of the water supply has not only not been changed, but fresh sources of impurity have been brought to it by the sewers. It is not to be wondered at that the mortality has rather increased than diminished; that the deaths from dysentery have doubled, and that the death-rate from consumption

is higher than it is on the bleak New England coast; on the contrary, it is rather surprising that the mortality has not been greater. The system of water supply of a city, and its sewerage, are two factors which must be considered together. To bring water in large amount into a city, and make no provision for its removal by sewers after it has been fouled by use, brings on soil pollution; to provide sewerage without an adequate water supply, or without the arrangements necessary to prevent deposits, is to establish a manufactory of offensive and dangerous gases; and to so arrange matters that the sewage, after having been conducted out of the city, shall contaminate its water supply, is certain, in the long run, to produce disease.

Moreover, in a city like Memphis drainage is quite as important a matter as sewerage, and we do not think that Dr. Maury puts the case too strongly when he says that "*we may not reasonably look for much improvement in our death-rate until our drainage is radically improved.*" We would add to this that ventilation must be provided under houses. If they are built without cellars or ventilation, the floors being but a few inches above the damp earth, as is the case with many dwellings in Memphis and New Orleans, it will not be possible to reduce the death-rates from consumption and other forms of lung disease to the point which they ought to occupy in those climates. And this matter of soil-drainage is one that must be carefully considered in deciding on the merits of the small water-tight pipe system of sewers. We believe that for many places this system is an excellent one, *if a drainage system is provided with it*, but the case of Memphis shows that there is great danger that it will not be provided.

We hope that other cities will heed the warning, and that the authorities of Memphis will go on and properly complete their work, and thus prove by actual trial the wisdom of the advice given them by their sanitary commission two years ago.

NAPELINE.

THE remarkable properties of aconite, as a remedy for the inflammatory state, as an anodyne, etc., are not possessed in their entirety by the alkaloid aconitine. The explanation of this variation is obvious. Aconite contains several kinds of aconitine—crystallized and amorphous, and *pseudo-aconitine*, which also exists in the two forms, crystallized and amorphous. The aconitine of commerce varies much in purity, the most highly esteemed being Morson's and Duquesnel's. In 1857, Hübschmann discovered in the root of aconitum napellus a new alkaloid, which he named *napelline*. Recently Duquesnel has isolated an alkaloid from the same source, which he designates *napeline*. It is probably the same as that discovered by Hübschmann, one *l* being omitted to give variety. Duquesnel's napeline has been lately studied by Laborde, who has conducted an experimental and clinical investigation. He finds that this new alkaloid differs in many respects from aconitine: it is less active, and has more decided hypnotic and calmative properties. Napeline causes quiet and profound sleep, similar to that caused by narceine. The first trial of it in man was in the case of a neuropathic individual, fifty years of age, attacked with neuralgia, which resisted all the well-known anodynes and antineuralgics. A decided soporific effect was produced by two doses of three and four centigrammes respectively ($\frac{1}{18}$ and $\frac{2}{18}$ grains), and there were no unpleasant after-effects. M. Dumontpallier has used *napelline* with success at Pitie in three cases of neuralgia—one of sciatica, one of facial neuralgia, and one of wandering neuralgia. Laborde finds that this remedy is indicated in neuralgia, persistent insomnia, and in general hyperexcitability of the nervous system. If it be found on further trials to possess the virtues claimed for it by M. Laborde, it will take place amongst our most valuable remedies, and afford another conclusive reason for the belief in the utility of aconite.

BEEF-TEA A STIMULANT, AND NOT A FOOD.

NOTWITHSTANDING it has been repeatedly shown that beef-tea is not a food, the laity, and to a considerable extent the profession, are slow to be convinced. That patients fed on beef-tea slowly starve is a fact, which the analysis only too conclusively supports, and which is sustained by accurate clinical observation. In the *Lancet* for October, 1880, p. 562, Mr. G. F. Masterman publishes an analysis, which shows that beef-tea has a chemical composition similar to urine. Beef-tea, most carefully prepared, says Dr. Neale in a recent issue of the *Practitioner* (November, 1881), does not contain, including alkaline salts, more than from 1.5 to 2.25 per cent. of solid matters, and such matter is mainly composed of urea, kreatin, kreatinin, isolin, and decomposed hæmatin. As a stimulant, beef-tea may be, and often is, highly serviceable, but as a means of support during the exhausting drain of a long illness, it does not compare in nutritive value to milk. Dr. Lauder Brunton raises the question whether beef-tea, a product of muscular waste, may not under some circumstances be actually poisonous!

THE SALICYLATES IN RHEUMATISM.

STATISTICS, to show the exact value of the salicylates as remedies in rheumatism, continue to appear in the English medical periodicals. In our last issue we referred to the paper of Dr. Hood in the *Lancet* of December 31, 1881, in which were tabulated twelve hundred cases of rheumatism, treated with

and without the salicylates, in Guy's Hospital. In the issues of the *Lancet* for January 7 and 14, 1882, there appears a statistical report from Dr. Sidney Coupland of cases of rheumatism treated in the Middlesex Hospital with salicylate of soda. The conclusions derived from an examination of these tables agree in the main with those heretofore published. Dr. Coupland finds that in the majority of cases salicylates speedily reduce fever and diminish the articular pains. Unless the remedy is continued for some time after the subsidence of the fever and pain, relapses will occur. All the reports agree that relapses are apt to take place even when the salicylates are kept up, and may be occasioned by indiscretions on the part of the patient. It is agreed also that these remedies do not prevent cardiac complications. Their actual value consists in the relief which they afford to the pain and fever, but they do not materially lessen the period of confinement necessary. Toxic symptoms are produced by them in a small proportion of the cases.

In the same issue of the *Lancet* we find some remarks of Dr. Maclagan on the administration of salicin and salicylates. He is the apostle of salicin, as our readers have been informed. He maintains that this is superior to the others because it has no injurious effect—a matter of much importance since this remedy must be used in the maximum doses. "Salicin is equally powerful as an anti-rheumatic, but it produces none of the deleterious effects of the salicylates," says Dr. Maclagan. Amongst the "disastrous effects" charged to the action of the salicylates are, according to Maclagan, "delirium, insanity, prostration of the vital powers, syncope, and even death." We need now some satisfactory evidence as to the value of salicin. This is in part afforded by Dr. Maclagan, who appends a report from thirty-nine hospitals of Great Britain. In most of these salicylates are used, but in the Glasgow Royal Infirmary, Glasgow Western Infirmary, and in the Dundee Infirmary, salicin is preferred. In the first named, the report from Prof. Charteris is that salicin and salicylates are "invariably satisfactory," but "preference is given to salicin over salicylates." In the second, the report by Prof. Gairdner is, "have always favored salicin as *versus* salicylates. Have not found it produce any unfavorable symptoms." In the third, the report from Dr. Maclagan says, "salicylates often caused gastric and cerebral disturbance; salicin produced no unfavorable results, and was equally potent."

As salicin is insoluble in water, and must be given in large doses, the question of administration becomes important. Doubtless, the best method is to enclose the powder in capsules, but it may be suspended in mucilage.

ENGLISH PIRACY.

IN our youth we remember the story of a pious preacher who with even perspiring zeal used to give the fiercest thwacks to the ancient Jews, going even so far as to "name" not a few like Ahab and Jezebel, but he was most tender and judicious in avoiding all allusion to the wicked deeds of the merchant princes and speculators who atoned for the sins of six days on 'Change by hanging on his eloquent lips on the seventh.

Our esteemed contemporary, the *Lancet*, seems to have somewhat of the same wise discernment in perceiving sins three thousand miles away, while it is blind to those which exist at its elbow. In the issue of January 7, it begins an article thus, "We have so often protested against the disgraceful practice of pirating English medical books by American publishers and editors, etc." Now it so happens that in the most flagrant case of English piracy of American books that we wot of, the *Lancet* was dumb, and further, although the attention of the editor was specifically called to the matter, he neither published the letter nor alluded to the fact. The "American Health Primers" were published two years ago in Philadelphia. Six of the twelve were republished by Ward & Lock, of London, under the new title of their "Long Life Series." Not only was no honorarium ever offered to the authors (as respectable American publishers usually do in the case of English authors), but their *names were actually erased from the title-pages*. Nay, more; the text was most carefully "edited" so as to cut out everything indicative of their American origin, and the series purported to be "written and edited by distinguished members of the medical profession," which, of course, would mean in England that they were of English origin. In our issue for December, 1880, we called attention editorially to the fraud practised on men like H. C. Wood, Burnett, Cohen, Richardson, Harlan, and White, yet the *Lancet* had no word of condemnation, and even a letter and a copy of one of the pirated books failed to disturb its equanimity.

Not long since the *Edinburgh Medical Journal* exposed the piracy of Dr. G. R. Cutter's *Dictionary of German Terms used in Medicine*, by Dr. Fancourt Barnes, of London, yet the *Lancet* had no "protest," such as its present zeal would suggest would have been at least consistent as well as eminently just.

THE NEW YORK STATE MEDICAL SOCIETY.

THE seventy-sixth annual meeting of this Society began at Albany on Tuesday, under the Presidency of Dr. Abraham Jacobi, of New York City. In another column we give a detailed account of the interesting proceedings, including full abstracts of the scientific papers and the discussions they elicited,

received by telegraph from our special reporter. We have also the pleasure of laying before our readers, in full, the valuable practical papers read at the meeting by Drs. Austin Flint and D. B. St. John Roosa.

We regret to be called upon to record the adoption of the proposed Code of Ethics, which permits consultations with irregular, but licensed, practitioners;—action which severs the affiliation of the Society with the American Medical Association, and which will prove, we fear, far-reaching in its pernicious influence.

SOCIETY PROCEEDINGS.

MEDICAL SOCIETY OF THE STATE OF NEW YORK.

Seventy-sixth Annual Meeting, held in Albany, February 7, 8, and 9, 1882.

(*By Telegraph, from our Special Reporter.*)

TUESDAY, FEBRUARY 7.—MORNING SESSION.

The Society met in the Geological and Agricultural Hall, and was called to order at 10 o'clock, by the President, Dr. ABRAHAM JACOBI, of New York, and the session was formally opened by religious exercises, by the Right Reverend Bishop DOANE, who read a portion of the Scriptures and offered a prayer.

The PRESIDENT then delivered his

INAUGURAL ADDRESS.

Dr. JACOBI referred to the status of medical science at the time when the Society was organized, seventy-five years ago, when Bichat first thought of establishing on a sound basis a pathology of the tissues—the period of schools and systems in medicine—in contrast with the present, when cellular pathology reigns supreme, and scientific methods prevail in medical science. In the various stages of progress, this Society has participated, and occupied an honorable position. The elevation of American medicine is due largely to the attainments of the general profession. There is no country in the world but ours, in which the professor and the practitioner are so near kin; the professor, almost always a practitioner, having been selected from the ranks of the profession. After speaking of the parts played by each, he stated that it has not always been on the part of the colleges what the profession understands by progress. In regard to the colleges, it may be stated that their requirements for graduation are certainly not always equally strict. We need not inquire into the reason for the inequality of level, be they pecuniary, intellectual, or other. But the fact is recognized, and nobody is more sorry for it than the profession. In the interest of the public, medical education ought to be of the most advanced kind; health and life claim the protection of the community. That these into whose hands the most important and sacred interests of the people are given, should owe their commission to a corporation of professors, with whose very instalment the community has nothing to do, appears preposterous. Thus the profession has for many years insisted upon a change in the law which licenses practitioners of medicine, and this is growing stronger day by day. Perhaps it cannot be said that the medical schools ever opposed the establishment of a State Board of Examination, which alone would be authorized to convey the license to practise, the right of the colleges to confer diplomas, notwithstanding. If it ever did, it is not probable that any college would now oppose any such movement, which I hope will be set on foot, and result in the Legislature passing a proper law. For the good colleges would not be afraid of their graduates not passing the State Board, and no college would be willing to thwart the movement for fear lest its unwillingness to compete might be recognized as, or alleged to be, the result of incompetency.

The question of affiliation with practitioners legally qualified, but not usually classed as regulars, was taken up and a favorable verdict given. It is asserted by many that the time was coming for abolishing the boundaries between the different classes of medical men. "I do not speak of schools of medical men, for modern medicine is not divided into schools. Moreover, as I have said, the homœopaths claim that they do not differ from us, do not mean to differ from us, as formerly they did, and proudly claimed to do. If we have reason to believe not only that medical science is one and indivisible, and based on logic and experimentation, but that we, the profession of the State of New York, are sufficiently imbued with that spirit of logic and experimental science, we may overlook differences, and meet with a spirit of reconciliation those who do not encounter us any more with the dicta of a school—a sect—but who claim that each individual man amongst them stands on his feet and does his own thinking. A crowd of men, favoring the profession with a battle-cry of '*similia similibus*' and 'no quarter,' exclude themselves, and cannot expect kind treatment at our hands. When the ranks, however, are dissolved, and no *corps d'esprit* raises the flag of hostility, and instead of a fighting army under orders, men come into your camp for reconciliation and a parley, the case is different. Besides, in the effort to better the condition of the profession and the public, it is better that no part of the legally qualified practitioners should be excluded from the benefit of such efforts, or from co-operating in that direction."

The question of preventible disease was taken up at some length and discussed, with especial reference to the necessity of providing hospitals for proper treatment of children suffering with contagious disorders, especially scarlatina and diphtheria, in all large cities. Such isolation and intelligent care is needed, not only for the poor, but also for the rich, in order to prevent the spread of these diseases. A letter written by the Secretary of the Society for the Prevention of Cruelty to Children, addressed to the Mayor of New York, illustrating the great need existing in that city, was quoted, and Dr. Jacobi announced that pecuniary aid had been promised for the establishment of such an institution in New York City.

In conclusion, attention was directed to the want of legislation to protect factory children in New York State, and it is recommended that (1) Children employed in factories should be under official supervision. In large cities the Boards of Health could be entrusted with this task. (2) Before being admitted to factory work a child of legal age ought to undergo a medical examination, and chlorotic, anæmic, scrofulous, crippled, scoliotic, bronchitic, and phthisical children, and those under the normal size for their age should be excluded. (3) No night or Sunday work ought to be permitted. (4) Some branches of work to be forbidden entirely, such as mining, glassworks, rag-sorting, working in mercury, lead, arsenic, etc., and in match factories. (5) The earliest age at which the young ought to be admitted to manufacturing employments ought to be fourteen years. Up to the period of puberty the energies of life and mind needed in the development of the individual should not be wasted recklessly.

Dr. Jacobi concluded his address with personal reminiscences, and a comparison between his position on his arrival in this country, twenty-eight years ago, upon exit from a political prison, and the position he now

occupied, the honors of which had been conferred upon him unsolicited by the Society.

The recommendations contained in the President's address were referred to a special committee to be subsequently appointed.

The President then announced the appointment of the following

COMMITTEES.

Business Committee.—Drs. D. B. St. John Roosa, of New York; W. S. Ely, of Rochester; and C. R. Lee, of Oswego Co.

Committee on Credentials.—Drs. Robert Frazier, of Oneida Co.; F. R. Bentley, of Ontario Co.; and William Taylor, of Madison Co.

A recess of ten minutes for registration was then taken.

After the recess the following gentlemen present were made

MEMBERS BY INVITATION.

Drs. E. C. Seguin, of New York; John B. Stonehouse, Wm. Geoghegan, Theo. P. Bailey, G. B. Tefft, Lewis Balch, all of Albany; Lucius E. Felton, of Potsdam,; Brayton Babcock, of Allegheny Co.; S. O. Vanderpoel, Jr., John F. Lockwood, H. R. Starkweather, S. R. Morrow, Chas. F. Huddleston, Lorenzo Hale, John Thompson, W. J. Nellis, all of Albany; Samuel Peters, of Cohoes; A. B. Huested, Otto Ritzmann, P. J. Keegan, and J. W. Gould, all of Albany.

Following the report of the Business Committee, was a report from the Special Committee appointed at the last meeting, to revise the Code of Ethics. By request of this Committee the Business Committee was directed to set apart a special evening for the discussion of the report, and Tuesday was appointed. The following draft of a Code of Medical Ethics was then presented by the Committee (consisting of Drs. Wm. C. Wey, C. R. Agnew, S. Oakley Vanderpoel, Wm. S. Ely, and Henry G. Piffard).

CODE OF MEDICAL ETHICS.

I. *The Relations of Physicians to the Public.*—It is derogatory to the dignity and interests of the profession for physicians to resort to public advertisements, private cards, or handbills, inviting the attention of individuals affected with particular diseases, publicly offering advice and medicine to the poor without charge, or promising radical cures; or to publish cases or operations in the daily prints, or to suffer such publications to be made; or through the medium of reporters or interviewers, or otherwise, to permit their opinions on medical and surgical questions to appear in the newspapers; to invite laymen to be present at operations; to boast of cures and remedies; to adduce certificates of skill and success, or to perform other similar acts.

It is equally derogatory to professional character, and opposed to the interests of the profession, for a physician to hold a patent for any surgical instrument or medicine, or to prescribe a secret nostrum, whether the invention or discovery or exclusive property of himself or of others.

It is also reprehensible for physicians to give certificates attesting the efficacy of patented medical or surgical appliances, or of patented, copyrighted, or secret medicines, or of proprietary drugs, medicines, wines, mineral waters, health resorts, etc.

II. *Rules Governing Consultations.*—Members of the Medical Society of the State of New York, and of the medical societies in affiliation therewith, may meet in consultation legally qualified practitioners of medicine. Emergencies may occur in which all restrictions should, in the judgment of the practitioner, yield to the demands of humanity.

To promote the interests of the medical profession and of the sick, the following rules should be observed in conducting consultations:

The examination of the patient by the consulting physician should be made in the presence of the attending physician, and during such examination no discussion should take place, nor any remarks as to diagnosis or treatment be made. When the examination is completed, the physicians should retire to a room by themselves, and after a statement by the attending physician, of the history of the case and of his views of its diagnosis and treatment, each of the consulting physicians, beginning with the youngest, should deliver his opinion. If they arrive at an agreement, it will be the duty of the attending physician to announce the result to the patient, or to some responsible member of the family, and to carry out the plan of treatment agreed upon.

If in the consultation there is found to be an essential difference of opinion as to diagnosis or treatment, the case should be presented to the patient, or some responsible member of the family, as plainly and intelligently as possible, to make such choice, or pursue such course as may be thought best.

In cases of acute, dangerous, or obscure illness, the consulting physician should continue his consultation-visits at such intervals as may be deemed necessary by the patient or his friends, by him, or by the attending physician.

The utmost punctuality should be observed in the visits of physicians when they are to hold consultations, but as professional engagements may interfere or delay one of the parties, the physician who first arrives should wait for his associate a reasonable period, after which the consultation should be considered as postponed to a new appointment. If it be the attending physician who is present, he will of course see the patient and prescribe, but if it be the consulting physician, he should retire, except in an emergency, or when he has been called from a considerable distance, in which latter case he may examine the patient and give his opinion in writing, and under seal, to be delivered to his associate.

III. *The Relations of Physicians to each other.*—All practitioners of medicine, their wives, and their children while under paternal care, are entitled to the gratuitous services of any one or more of the faculty residing near them, whose assistance may be desired.

Gratuitous attendance cannot, however, be expected from physicians called from a distance, nor need it be deemed obligatory when opposed by both the circumstances and the preferences of the patient.

The affairs of life, the pursuit of health, and the various accidents and contingencies to which a medical man is peculiarly exposed may require him temporarily to withdraw from his duties to his patients, and to request some of his professional brethren to officiate for him. Compliance with this request is an act of courtesy which should always be performed with the utmost consideration for the interests and character of the family physician, and when exercised for a short period, all the pecuniary obligations for such service should be awarded to him. But if a member of the profession neglect his business in quest of pleasure and amusement, he cannot be considered as entitled to the advantages of the frequent and long-continued exercise of this fraternal courtesy without awarding to the physician who officiates the fees arising from the discharge of his professional duties.

In obstetrical and important surgical cases, which give rise to unusual fatigue, anxiety, and responsibility, it is just that the fees accruing therefrom should be awarded to the physician who officiates.

Diversity of opinion and opposition of interest may, in the medical as in other professions, occasion con-

troversy and even contention. Whenever such cases unfortunately occur, and cannot be immediately terminated, they should be referred to the arbitration of a sufficient number of physicians before appealing to a medical society or the law for settlement.

If medical controversies are brought before the public in newspapers or pamphlets, by contending medical writers, and give rise to, or contain assertions or insinuations injurious to the personal character or professional qualifications of the parties, the effect is to lower in the estimation of the public, not only the parties directly involved, but also the medical profession as a whole. Such publications should, therefore, be brought to the notice of the county socities having jurisdiction, and discipline inflicted, as the case may seem to require.

COMMUNICATIONS FROM COUNTY SOCIETIES.

In the call of reports from County Societies, the New York County Society only, was ready with a report, and offered a communication in regard to medical legislation and medical ethics, which were by request referred to special committees already existing.

THE COMMITTEE ON PRIZE ESSAYS

reported that but one essay had been forwarded, "On Tubercle and Cancer," which was deemed worthy of publication, but did not possess the evidence of original research and high standard of excellence to qualify it for the honor of a prize.

Dr. WILLIAM S. ELY, appointed at the last meeting Censor of the College of Medicine,

SYRACUSE UNIVERSITY,

reported favorably, after examination, as to the qualifications of graduates of that school. The high standard observed was attributed chiefly to its graded course of instruction.

The Business Committee offered a resolution limiting the time of reading papers to twenty minutes, and making all motions to extend the time out of order.

On motion, three meetings were directed to be held daily (9 to 12 M., 3 to 6, and at 8 P.M.)

Scientific papers being called for, Dr. F. R. STURGIS read a paper in connection with the subject of Medical Education (which was made a topic for special discussion at this meeting, by the action of the New York County Society, as presented in their communication to this Society), entitled:

HINTS AND SUGGESTIONS UPON MEDICAL EDUCATION.

After considering the problems as presented at present in this country, Dr. Sturgis recommended the following measures as a step towards their solution:

1. The absolute incorporation of medical schools with some chartered school or university making the governing bodies of both the same.

2. Endow the school liberally for educational purposes and make it independent of the students' fees.

3. Separate the right to practise from the diploma. The latter, then, should be a token of proficiency in study and knowledge, and its possession from some school in good legal and professional standing, should be made obligatory before a candidate can present himself for authority to practise in this State.

The views expressed were earnestly endorsed by Dr. ROOSA, and were further discussed by Dr. PERKINS.

Dr. MOORE, of Rochester, advocated the establishment of an Examining Board under the authority of the State Society, rather than to entrust the interests of the profession to an irresponsible and independent body of persons. The great advance in medical education in this country, from the time of his own graduation and under his own observation in the experience of a single lifetime, was referred to, and a hopeful view taken of medical progress in this country in the future. Referring to the establishment of a Board of Examiners, he said that it would not succeed if hostile to the schools, but having a representative from each of the schools in the Commonwealth, it might establish a system of uniform examination for the medical degree. The standard was stated to be what a young man of average attainments can accomplish in the space of time allotted to him. The expenses of the Board should be borne by the Colleges, and the Board should be kept entirely free from political intrigue and influence. Irregular schools and practitioners ought not to be recognized.

Dr. PIFFARD, of New York, advocated the establishment of a single mixed Board, such as was contemplated by Dr. Sturgis.

Dr. STURGIS, in conclusion, claimed that the establishment of such a Board would place irregulars under some sort of control, and do away with all partisan and sectional feeling, which is now the strongest argument of the quack.

Dr. E. R. SQUIBB, of Brooklyn, read a

NOTE ON CLINICAL THERMOMETERS,

calling attention to the defects of the instruments now in use. Thousands of cheap thermometers are sold annually, which are devoid of the skill and care requisite to make a good instrument. The aim should be to obtain one accurately graded to the range within which it is intended to be used. Besides the ordinary errors due to faults of calibre and length, there is a contraction of the bulb, which, rapid at first, continues more slowly, even for several years. After three years, however, it is insignificant, unless the bulb should be heated. Thermometers should not be graduated immediately after they are made. All thermometers should be seasoned for at least three years before the tubes are graduated. The majority of cheap thermometers give incorrect observations, as do also good instruments which have been graduated too soon. Every clinical thermometer should be accompanied by a Kew certificate, or, in this country, by the certificate of the Observatory of Yale College. The charge is fifty cents for this service, and if a physician has a clinical thermometer with such a certificate of examination after three years' seasoning, he can rely upon having a good instrument for use. Dr. Squibb gave the following requisites for a good instrument:

1. The mercury should not rise too slowly; if it does, the bulb is too thick; if too rapid, the bulb is too thin.

2. If the time required to reach the maximum under the tongue is more than nine minutes, it should be rejected as too slow. It should attain it inside of nine minutes, remaining nearly stationary after five or six minutes. Those attaining the maximum too early are liable to be easily broken.

3. The self-registering thermometer should not have its index shaken down too readily. After the register is joined with the column, the instrument is spoiled. Hick's lens-front thermometer was spoken of favorably. A tube five or six inches in length is preferable to one of four.

For correcting a thermometer Dr. Squibb recommended placing it with a standard thermometer under the tongue, and comparing the maximum readings.

The Business Committee presented

OBITUARY NOTICES

of Drs. Levant B. Coates and John F. Whitbeck, which were referred to the Publication Committee.

By request of several members the Business Committee recommended that the proper section of the By-Laws be suspended in order that the

REPORT OF THE NOMINATING COMMITTEE

should be made at the close of the second day's session instead of deferring it until the third day as before. As

it required unanimous consent, it was lost by Dr. Vanderpoel voting in the negative.

Dr. WILLIAM S. ELY, of Rochester, read a short paper, entitled

NOTE ON BEEF-JUICE.

He advocated its liberal use (4 to 30 ounces per diem). He advised in its preparation the use of the "fruit-press." A pound or two of lean beef is cut in small pieces, and thoroughly heated, but not cooked, over the fire, and then being transferred to the cylinder is expressed, and subsequently strained. It contains the juice of the meat, the albumen being uncoagulated. He used it largely in diphtheria; in one case he gave the juice of nine pounds of meat in twenty-four hours (making twenty-eight ounces of juice). It can be used for rectal alimentation.

Dr. GRAY advocated the addition of some alcohol or claret, in order to preserve the fluid.

The Business Committee announced that the

ANNUAL BANQUET

would be given at the Delavan House, immediately after the delivery of the Annual Address by the President, at the Capitol, on Wednesday evening.

FIRST DAY.—AFTERNOON SESSION.

The Society re-assembled at 3 o'clock.

Dr. S. O. VANDERPOEL read a brief, but interesting and suggestive paper, entitled

THE PRESENT CONDITION OF THE TUBERCULOSIS QUESTION,

which he recapitulated as follows:

1. Pulmonary phthisis is not wholly a blood dyscrasia, resulting in the deposition from the blood of a peculiar element of low vitality, called tubercle; at first, in small gray granules, which aggregate, change their appearance, and become the large cheesy masses so familiar to all. A doctrine elaborated by Laennec, and still maintained by a large proportion of the German school.

2. Nor is it, as taught by Niemeyer, a simple caseous degeneration, but rather is the result of catarrhal inflammation in a scrofulous subject, whether in a bronchial or mediastinal gland, which becomes an infecting focus; as a result, the tubercular element soon appears. This material of low vitality soon undergoes necrotic changes, hastening this process in the general mass. The infecting foci are constantly increased until the lung tissue is largely infiltrated; with the increase in infiltration, there is a corresponding increase in the range of temperature and rapidity of emaciation, the tubercular deposit favors this activity, as we know in cases of pure tubercular phthisis. If, then, by appropriate treatment, hygienic or medicinal, we can exclude it, the chronicity of the case is better assured, and the chances of recovery correspondingly increased. It gives a percentage of hope, where the teachings of half a century have been almost hopeless.

The reading of Dr. Vanderpoel's paper upon tuberculosis led to an interesting discussion upon the pathological characters of consumption.

THE PRESIDENT, being called upon for his views upon the subject, said, in reference to the term scrofula, that the word is generally and legitimately used to express a certain condition, in which we wish to avoid circumlocution. In one individual, an inflammation, following injury of a mucous membrane, goes regularly through certain changes, by proliferation of cells, to the formation of healthy tissue; in another case the proliferation of cells occurs, but instead of forming normal epithelium the cells break down, and, their production continuing, they accumulate without completing the process of repair. A similar process may occur in bone or in a gland; the cells finally undergoing fatty degeneration, "caseation," or softening. When this tendency is discovered, it is common to express the fact by the use of the term scrofula. He believed it entirely unnecessary to refer such a condition to a hypothesis based on the old humoral pathology. In many cases of tuberculosis of the lung, the process is an embolic one. In conclusion, he called attention to the necessary distinction insisted upon by Niemeyer, existing between phthisis and tuberculosis, a distinction which appears to be often ignored in discussions upon the subject at the present time.

POSTURAL TREATMENT OF UTERINE DISEASE.

Dr. W. W. POTTER, of Buffalo, read a communication on the "*Genu-Pectoral Posture in Retro-Displacements of the Uterus and Prolapsus of the Ovaries.*" The conveniences required in knee-chest manipulations are (1) a table on casters; (2) a speculum (Bozeman's preferred); (3) forceps, double curved; (4) cotton pledgets, secured by threads of silk, about the size of a walnut, prepared in advance; (5) pessaries (Albert Smith's) of several sizes, and a few astringent and sedative solutions. The sound is rarely needed in the retro-displacements when treated in this posture. If it be correctly assumed, a right-angled triangle is formed, with the table for its base, the thighs of the patient the perpendicular, and the body the hypothenuse. In some cases the retroverted uterus immediately resumes its normal position; in others, the cotton is packed *in situ* for several days in succession, until more permanent methods of support can be adopted if found necessary.

A biographical sketch of a deceased member, Dr. James P. Boyd, was read by title and referred.

THE NOMINATING COMMITTEE

was selected as follows: from 1st District, Thomas R. Pooley, M.D.; 2d District, J. Foster Jenkins, M.D.; 3d District, Norman L. Snow, M.D.; 4th District, B. F. Sherman, M.D.; 5th District, W. H. Johnson, M.D.; 6th District, C. L. Stiles, M.D.; 7th District, John Gerin, M.D.; 8th District, W. W. Potter, M.D.; Society at large, William C. Wey, M.D.

The following-named visitors were made

MEMBERS BY INVITATION:

Drs. Franklin Townsend, Albany; Ed. H. Squibb, Brooklyn; T. Z. Gibbs, Fort Ann; D. H. Goodwillie, New York.

EXTRAORDINARY BONE DEVELOPMENT.

Dr. E. M. MOORE, of Rochester, exhibited a specimen and reported a "Case of Extraordinary Bone Development," which originally was a dorsal dislocation of the head of the femur, which, after manipulation, was left in the extraordinary position of reversing the head of the femur, so that it pointed anteriorly on the dorsal aspect of the ilium, with the toes pointing outwards; the shortening was over two inches. Anchylosis and immense bony development occuring, subcutaneous division of the femur with a Hey's saw was made by Dr. Moore, and the leg was brought into good position and drawn down, a gap of one and one-half inches being subsequently filled with bone, although a false joint could not be secured. The man was able to walk upon the limb and continue his avocation.

EFFECTUAL DOSAGE OF CERTAIN REMEDIES USED IN THE TREATMENT OF NERVOUS DISEASES,

was the title of a short paper by Dr. E. C. SEGUIN, of New York. He had been led to present this communication from having observed a number of cases, especially of chorea, and cerebral syphilis, or brain tumors, in which practitioners had used the proper remedy, but had failed in the desired result, because they had been

too timid in administering sufficiently large doses. There seems to be a deficiency in medical teaching as to the maximum physiological dose that may be employed in particular cases. He then reviewed posologically a few drugs, giving the doses usually recommended, and the maximum in certain cases of nervous disease, based upon personal experience. He advised beginning with the ordinary doses and pushing them rapidly, in proper cases, to the maximum required by the individual. They are especially considered in reference to their use in nervous diseases. *Nitrate of silver* is commonly employed in doses of one-sixth to one-half grain three times a day, in locomotor ataxia, and various forms of sclerosis especially, and Erb speaks of it very favorably in this class of cases. Dr. Seguin's experience has led him to endorse the views of Erb, and he has used it also in myelitis. He recommends one-quarter to one-half grain to be given thrice daily before meals and continued for several months. He has never seen any cases of argyria resulting.

Duquesnel's Aconitia.—Gublar introduced and highly recommends in trigeminal neuralgia (from $\frac{1}{120}$ to $\frac{1}{124}$ of a grain). His own experience is very favorable (Caswell & Huzard, and Schiefplin & Co., make very reliable tablet and pills of aconitia), he recommends a commencing dose of $\frac{1}{140}$ of a grain, and carefully discovering the amount of susceptibility of the patients. In debilitated and female patients, it is better to begin with $\frac{1}{300}$ or $\frac{1}{250}$ of a grain; after using this for several days without bad effects, the drug may be pushed to $\frac{1}{100}$ of a grain, given three times a day. He had given from four to eight of such doses in cases of ataxia without relieving the pain or causing numbness; he had found it especially valuable in trigeminal neuralgia. *The Fluid-Extract of Conium* (Squibb), has for its usual dose from ɱij–v.; much larger doses are well borne. [This paper was cut short by the expiration of the time allotted by the Business Committee; it was, on motion, referred to the Publication Committee, the lecturer not being a member of the Society except by invitation.]

Dr. CHASE, of Brooklyn, reported a case of supra-orbital neuralgia, in a lady of eighty years, in which he had given $\frac{1}{75}$ of a grain of aconitia, three times a day (aggregating $\frac{1}{25}$ of a grain in the day). After six or seven days prostration occurred, but no worse result. Dr. Seguin said that he had given as much in aggregate as ⅙–⅛ of a grain in the day; he was not aware of any fatal accident, although some cases of collapse had followed large doses.

Dr. SQUIBB objected to the proprietary flavor of the expression used by the lecturer, of Squibb's conium, as the preparation is simply the fluid-extract of conium prepared according to the U. S. Pharmacopœia of 1860. In connection with the subject of the paper, he remarked that it should be remembered that there is a different susceptibility to drugs and the effects are slightly different in kind in different persons. We must, therefore, be careful in applying general averages to individual cases. The different varieties of aconite furnish different alkaloids, and the Duquesnel's aconite is probably obtained from the aconite of the Himalayas, which is comparatively stronger than our Napellus, and is properly known by the name of the manufacturer.

Dr. SEGUIN, in concluding the debate, mentioned that the doses of conium usually ordered were insufficient; he uses very large doses in proportion, never giving less than gr. xx.–xxxx. to adults; sometimes giving as much as a drachm at a dose, with only good effects in chronic convulsive disorders, especially in chorea of adults. He also uses the conium in doses of gr. xx.–xxx. as an indirect hypnotic, especially in combination with bromide of potassium.

Dr. SQUIBB, by permission, warned against the danger of diluting the conium fluid-extract—of a precipitate being formed, the active principle may be deposited and thus be given in a comparatively large dose at the end. He knew of bad results, but of no fatal accidents from this cause.

Dr. CHARLES S. BULL read an essay on

SYPHILITIC DISEASES OF THE LACHRYMAL APPARATUS.

The specific lesions of these associated organs are rare; when affecting the tear-gland, the parenchyma is invaded, but the sac usually escapes injury. Two cases of syphilitic disease of the caruncle, occurring in the practice of Dr. Post, of New York, were reported, the form of disease being gummy infiltration. Papular and tubercular syphilis may occur on the lids, and extend to the canaliculus, and into the sac. More commonly the disease commences in the nose, and subsequently causes dacryo-cystitis. The orifice of the nasal duct may be obstructed by a mucous patch it its neighborhood, or by a gummy deposit. The obstruction usually begins near the opening of the duct, but subsequently the disease and resulting stricture may involve the entire length of the duct. Epiphora, and dacryo-cystitis, and abscess, with subsequent fistula, may result, but not very commonly, from syphilis. The tendency of syphilitic lesions of the lachrymal apparatus is destructive, unless properly and promptly treated. Necrosis and sequestration of the bony portion of the lachrymo-nasal canal is a secondary process likely to occur; also periostitis followed by exostosis, and, perhaps, caries and obliteration of the nasal duct. Especially is this process likely to commence in the ascending apophysis of the superior maxillary bone. Medical treatment of these cases, in preference to surgical interference, is considered to be of advantage to the patient. Surgeons should not hastily slit up the canaliculus in cases of syphilitic disease of the eye.

Dr. LUCIUS E. FELTON, of Potsdam, presented a model of a

NEW GALVANIC BATTERY.

In this battery the carbons are cylindrical, and about three inches in length. In order to prevent the corrosion of connections the end of the carbon is covered with copper, and a metal plug is then driven into a hole bored for the purpose. The carbon is next dipped in melted paraffine, the exposed portion is then coated with marine glue, which perfectly protects the connection. The zincs are united in sections, so that those not in use need not be immersed in the fluid. The cells are absolutely water-tight, so that no fluid escapes if the battery is turned over. The electro-motor force is a little over two Volts. for each cell. It is a simple bichromate and acid battery with zinc and carbon elements. The one exhibited contained eighteen cells.

The apparatus was commended by those who examined it, and considered an improvement over the ordinary form of constant current batteries.

FIRST DAY.—EVENING SESSION.

The meeting was called to order at 8 o'clock, and the consideration of the report of the Committee on the

CODE OF ETHICS,

which was made the special order for this evening, was discussed. Inasmuch as the proposed new Code of Ethics contemplated such an innovation as permitting consultation with irregular practitioners, it naturally called forth general expression of opinion, which, to a great extent, was adverse to it.

Dr. ROOSA, of New York, as a substitute to the report of the special committee, offered the following:

"The Medical Society of the State of New York, in view of the apparent sentiment of the profession connected with it, hereby adopts the following declaration, to take the place of the formal Code of Ethics, which has,

up to this time, been the standard of the profession in this State.

"With no idea of lowering, in any manner, the standard of right and honor in the relations of the physicians to the public and to each other, but, on the contrary, in the belief that a larger amount of discretion and liberty in individual action, and the abolition of detailed and specific rules, will elevate the ethics of the profession, the medical profession of the State of New York, as here represented, hereby resolve and declare,

"That the only ethical offences for which they claim the province to exercise the right to discipline, are those comprehended under the commission of acts unworthy a physician and a gentleman.

"*Resolved, also*, That we enjoin the County Societies, and other organizations in affiliation with us, that they strictly enforce the requirements of this code."

The substitute received thirty-nine yeas and thirty-seven nays. The President ruled, however, that it was an amendment to the By-laws, and required a two-thirds vote, and, therefore, he declared it lost.

The report of the Committee (see page 161) was finally adopted by a two-thirds vote, after the entire evening had been devoted to its discussion.

WEDNESDAY, SECOND DAY.—MORNING SESSION.

Meeting was opened by prayer at 10 o'clock—Dr. WILLIAM GOVAN, Vice-President, in the chair.

The following gentlemen were made

MEMBERS BY INVITATION:

Drs. S. G. Delamater, of Duanesburg; J. P. Creveling, of Auburn; J. F. Fox, of Cohoes, and J. Ennis, of Schenectady.

THE COMMITTEE ON BY-LAWS

reported having made an examination of the proposed alterations in the By-laws of Rockland, Greene, Fulton, and New York Counties, and finding them in accordance with the laws of the State of New York, and of the By-laws of this Society, recommend their approval. The report was adopted.

The Committee also reported that only six County societies were operating under by-laws in accordance with the laws of the Society, and urged other societies to present their by-laws to the State Society for revision according to law.

Dr. PERKINS, of Schenectady, offered a resolution directing a committee to be appointed to make arrangements for the

CORRECTION OF CLINICAL THERMOMETERS

by the Dudley Observatory, at Albany, on the plan pursued by the Winchester Observatory, of Yale.

This motion was opposed by Dr. Squibb, and he urged that Yale Observatory had been well equipped, at considerable expense, and was now able to examine all the clinical thermometers in the country, and at a very reasonable charge. The motion was accordingly lost.

The following

AMENDMENT TO THE CONSTITUTION

was proposed by Dr. Roosa, of New York, and laid over, under the rule, for one year:

"Offences against the ethics of this Society are only to be comprised under the head of acts unworthy of a physician and a gentleman."

REPORT OF THE TREASURER.

The Treasurer, Dr. CHARLES H. PORTER, of Albany, made his annual report, showing a balance in the treasury of $453. The accounts were audited and approved.

THE COMMITTEE ON HYGIENE,

Dr. E. V. STODDARD, of Rochester, Chairman, made a verbal report of progress, and asked permission to present the formal report to the Secretary for publication in the proceedings.

THE COMMITTEE ON EXPERIMENTAL MEDICINE

reported, through its Chairman, Dr. JOHN G. CURTIS, of New York, that a bill presented by Mr. Bergh to the State Legislature, preventing vivisection, had failed to pass, chiefly owing to the efforts of this committee.

The report concluded with the following resolutions, which were adopted:

Resolved, By the Medical Society of the State of New York—

I. That it is the unanimous opinion of the members of this Society, that the unrestricted performance by qualified medical men of scientific experiments upon animals, is essential to the maintenance and progress of the science and art of medicine.

II. That while the Society would thus set forth to the Senators and Assemblymen, in Legislature assembled, the views of the medical profession of the State upon this subject, it would also call their attention to the fact that at the late International Medical Congress in London, a formal resolution, denouncing interference with experimentation upon animals, was adopted by more than three thousand official representatives of the medical profession of the world.

III. That in the event of the introduction of any so-called "anti-vivisection bill" into the Legislature of 1882, it shall be the duty of the Committee on Experimental Medicine to forward a certified copy of these resolutions, as a memorial from this Society, to the Governor of the State of New York, and to each house of the Legislature thereof.

On motion of Dr. AGNEW, of New York, it was directed that the foregoing resolutions be printed and distributed among the members of the Legislature.

THE COMMITTEE ON LEGISLATION

reported, through its Chairman, Dr. Albert Vanderveer, of Albany, in regard to the communication from the County Society of New York, containing drafts of amendments to two laws regulating the practise of medicine in this State. The first amendment provides that

"The Regents of the University of the State of New York shall appoint one or more boards of examiners in medicine, each board to consist of not less than seven members, who shall have been licensed to practise physic and surgery in this State; and all persons desiring to practise physic or surgery, after the passage of this act, must submit to the examination hereinafter provided, and obtain the diploma hereinafter provided, before entering upon the practise of physic or surgery in this State."

The second amendment is intended to remedy the defects discovered in the Act of 1880, "to regulate the licensing of physicians and surgeons."

On motion, the above recommendations were directed to be printed and distributed among the members, and made the special order of business for Thursday.

Dr. DANIEL LEWIS, of New York, read a paper on

THE TREATMENT OF SCARLATINA,

in which, following the recommendation of Prof. Bartholow, in his Cartwright lecture on the antagonism of drugs to disease, he had adopted the treatment of scarlatina by digitalis in full doses. He commended the use of the infusion of the fresh leaves, given in drachm-doses three or four times a day, to children (from three years up). The only other treatment was by local application of glycerin diluted, with tincture of chloride of iron and chlorate of potassium, during convalesence. The results of one hundred and fifty cases were given in this communication, out of which only seventeen died. There were only two cases of otitis in the entire number, and

both were mild ones. No cases occurred of suppuration of the cervical glands.

Dr. LARENZO HALE, of Albany, presented an essay on

AN IMPROVED DRESSING FOR FRACTURED CLAVICLE,

in which he recommended a modification of Moore's dressing; the principal feature of this new method consisted of an adjustable back-sling made of a suspender-brace, being tightened during the day, and allowed to be more lax during the night.

Dr. VANDERVEER spoke in approval of this dressing from personal experience.

Dr. H. KNAPP, of New York, read a paper

ON CROUP OF THE CONJUNCTIVA, WITH REMARKS ON CONTAGIOUS FORMS OF CONJUNCTIVAL INFLAMMATION.

From observation of two unusual cases occurring in children, he announced that he had been obliged to change a previously-held opinion, and was led to recognize an important difference between the morbid anatomy of croupous and diphtheritic inflammation, and important differences between the course of the two diseases when affecting the structures of the organs of vision. He concluded with some remarks upon the value of the methodical application of cold to communicable conjunctival disorders, especially by light ice compresses, continued until the tumefaction of the lids and the thickness of the discharge is reduced. This treatment is capable of saving all cases of ophthalmia neonatorum, and nearly all cases of conjunctival diphtheria.

Dr. C. R. AGNEW, of New York, read a paper upon

COMMUNICABLE EYE DISEASE, AND SOME OF ITS RELATIONS TO BLINDNESS AND PAUPERISM,

and urged greater attention to the hygiene of children's homes, especially as regards cleanliness in lavatories, breathing space in sleeping apartments, and abundance of milk in the diet.

The two preceding papers were discussed together, the members generally speaking in slighting terms of the use of antiseptics *per se*, and insisting upon the importance of systematic cleanliness, cold applications, and good general hygiene. The use of water slightly impregnated with neutral salts, such as sodium chloride, and saturated solution of boracic acid, were generally recommended in preference to more active treatment on the one hand, or simple water dressings upon the other. In using cold, the prevalent "slop-water application" was condemned, as keeping the patient wet and uncomfortable; and because he had seen secondary inflammation of the auditory meatus caused in several cases by the water washing the secretions down into the ear. The plan preferred was by placing a block of ice at the bedside, the cloths being laid upon it, and frequently renewed; another plan was to fill a small rubber bag with snow, or pounded ice, and keep it applied as before.

INTERNAL ŒSOPHAGOTOMY.

Dr. JOHN O. ROE, of Rochester, read the history of a case of a lady who suffered with difficulty in swallowing for several months without assignable cause. Dr. Roe diagnosticated stricture of the œsophagus, although no permanent organic narrowing existed. Internal œsophagotomy, after the plan of Morell Mackenzie, of London, was proposed and practised, followed by rapid and complete recovery.

SECOND DAY.—AFTERNOON SESSION.

In the discussion upon Dr. Roe's paper two unpublished cases of internal œsophagotomy, with successful results, were mentioned by Dr. ELSBERG. He warned the Society that the operation should not be done except in great emergency, and even then only with the greatest care to prevent serious injury.

Dr. POST, of New York, desired to correct the possible impression which might be received from the paper, that a person suffering with œsophageal stricture must necessarily starve to death, and that the operation is the only alternative. Rectal alimentation will keep the patient alive for an indefinite period.

Dr. LOUIS ELSBERG read a paper on

THE MUSCLES OF THE LARYNX AND THE LARYNGOSCOPIC IMAGES PRODUCED BY THEIR PARALYSIS.

If, in affections of either the brain or the pneumogastric or the recurrent laryngeal nerve, all the laryngeal muscles on either or on both sides are paralyzed, the corresponding vocal bands, of course, assume a position uninfluenced by muscular action, *i. e.*, like the cadaveric position. When they are fixed in this position, either on one side or on both, during attempts at phonation, as well as during respiration, the appearance is very characteristic, and easily recognized by means of the laryngoscope, so that the diagnosis is clear and conclusive. In such a case there is no real difficulty of breathing, but a good deal of *leakage of air*, as I call it, and therefore a waste of breath. The voice is weak, or else reduced to an almost inaudible whisper. The patient cannot cough, expectorate, or speak properly, because in these acts it is necessary to close the *rima glottidis;* and this he cannot do. Speaking, of course, requires a greater effort, the muscles of expiration (especially the abdominal) are unusually strained; therefore, discomfort is felt, and quickly, fatigue. On forced inspiration, a stridulous sound is often produced, which comes from the air passing through the upper aperture of the larynx and the flaccid vocal bands.

But when the paralysis, whether bi-lateral or unilateral, *is* or *becomes incomplete*, a very curious, and as yet unexplained, fact has been observed, which is of very great importance for general medical practitioners, as well as for specialists, to know; it is the fact that the abductor filaments (those that separate the vocal bands) are more prone to be affected than the adductor filaments (those that shut up the breathing space), and that if in a disease in which both the abductors and the adductors are affected, *recovery* takes place, the adductors are apt to recover first, or exclusively; so that in such a case a patient *during the progress of recovery* is in danger of a dyspnœa, which may necessitate tracheotomy to prevent death.

Paralysis of the narrowers of the rima glottidis causes, during attempted phonation, more or less leakage of air, and gives its characteristic image during that act; while paralysis of the wideners of the rima glottidis causes more or less dyspnœa, and must be examined for its characteristic image during inspiration and expiration. The first causes phonatory leakage, the second respiratory insufficiency.

Dr. WILLIAM HAILES, Jr., of Albany, presented a communication upon *Improved Methods in Laboratory Teaching and Demonstrations in Histology.*

Dr. AUSTIN FLINT read a paper upon

THE PHYSICAL DIAGNOSIS, BY MEANS OF PERCUSSION AND EXPLORATION BY PUNCTURE, OF PERITONITIS WITH AND WITHOUT PERFORATION OF THE ALIMENTARY CANAL, AND THE EMPLOYMENT OF ASPIRATION IN CASES OF PERFORATING PERITONITIS. (See p. 149.)

TREATMENT OF DOUBLE TALIPES EQUINO-VARUS.

Dr. A. M. PHELPS, of Chateaugay, reported eight cases treated by free incision and extension. Experience had confirmed his previously expressed opinion of the value of this method. The cases fit for this operation are not common, perhaps only one out of

five or six are proper subjects. He recommends primary division of the tendo-Achillis, then, of the posterior tibial tendon, and if this will not bring the foot into good position, open incision of the plantar structures will give a successful result.

THE TREATMENT OF HAIR-MARKS BY ELECTROLYSIS

was advocated by Dr. GEO. H. FOX, of New York, it having been suggested by the successful application of the method for the removal of superfluous hairs. The treatment of superficial nævi by this means was contrasted with scarification, as recommended by Balmanno Squire, of London, and preference given to the electrolysis. The objections are tediousness of operation and severe pain; it is not applicable, on this account, to young children. Some slight scarring must be expected.

Dr. SHERWELL, of Brooklyn, preferred multiple puncture, with needles dipped in caustics, to the electrolysis.

Dr. H. KNAPP, of New York, had obtained good results from extirpation, either by dissection or caustic, and he finds that subsequently the remainder will obliterate. If possible, we should discern the starting-point of the telangiectasis and remove it.

Dr. SHERMAN, of Ogdensburg, reported a case cured by the procedure recommended by Dr. Knapp.

Dr. A. VANDERVEER reported an attempted

SUBCUTANEOUS SECTION OF THE NECK OF THE FEMUR,

in a case of ankylosis of the hip, and explained the method of performing the operation. The lady had suffered with prolonged hip-disease, and being given up as hopeless by her physicians, the limb was allowed to assume a very awkward position, in which ankylosis finally occurred. A subcutaneous operation was attempted, but the saw breaking in the wound, it was found necessary to enlarge the incision and remove the saw with the forceps, virtually making an open wound. After section of the neck of the femur and extension, it was found that tenotomy of the adductors was needed. The limb was now placed in a good position. An abscess occurred at the site of the wound, but the patient finally recovered, and a false joint was obtained. The limb is now straight and useful, with good motion at the hip.

THE DIVISION OF OPTIC AND CILIARY NERVES FOR SYMPATHETIC OPHTHALMIA

was advocated, by Dr. H. D. NOYES, of New York. Two forms of sympathetic ophthalmia are observed: (1) the irritative, (2) the inflammatory. The former sometimes merges into the latter, but the inflammatory form may arise without being preceded by inflammation. Sympathetic ophthalmia of the irritative form, and the milder cases of the inflammatory form, are generally checked by enucleation of the offending eye; in some other cases of inflammation this, for some unexplained reason, is not sufficient. The modification of the original operation of cutting the nerve is performed by going between the internal rectus and the superior or the inferior, into the depth of the orbit, dividing the optic nerve, and everting the globe, in order to completely divide all the nerve-fibres. Some operators divide one or both of the lateral recti-muscles. Simple neurotomy sometimes is followed by reunion of the nerves, the sensibility of the cornea returning in about twelve months; neurectomy, removing a small piece of the optic nerve, is, therefore, to be preferred to simple division of the nerve, with a view to the ultimate success of the operation.

Optico-ciliary neurectomy is to be preferred as a prophylactic in cases where the affected eye is (1) extremely tender on pressure, and (2) subject to repeated attacks of inflammation. Under these circumstances, it will affect the other eye sooner or later. It may also be performed in other cases where enucleation should be performed, but where consent to extirpation of an offending eye cannot be obtained.

In cases of absolute and painful glaucoma this operation has the advantage of reducing the tension of the globe and retaining its normal appearance and size.

Dr. KNAPP approved of all that had been said in regard to the importance of preventing sympathetic ophthalmia, but could not endorse his remark that optico-ciliary neurotomy is in general favor among specialists. He had performed it himself nine times, in one of which gangrene of the globe occurred. Von Gräfe had written a monograph upon the subject and pointed out many cases in which this operation is entirely inadmissible. At the Ophthalmological Section of the International Medical Congress the subject was freely discussed and many bad results and some fatal cases reported. In many cases the operation only serves to delay enucleation until it is too late to be of service.

Dr. ROOSA opposed the operation, and would never perform it.

Dr. L. D. HALLOWELL, of Buffalo, advocated division of the ciliary nerves in proper cases as a preliminary measure, though not intended to be applicable to foreign bodies in the eye.

MEMOIR OF THE LATE DR. JAMES P. WHITE,

of Buffalo, by Dr. AUSTIN FLINT, was presented and referred to the Committee of Publication.

Dr. L. D. BULKLEY, of New York, read a paper entitled,

THE MALIGNITY OF SYPHILIS,

with an analysis of 450 cases, protesting against the views recently enunciated that syphilis may be regarded as a benign disease. Dwelling upon the prevalence of the disease and its varied manifestations, he concluded that it is, in point of frequency, only second to phthisis. It is closely related to scrofula and similar degenerative disorders.

His consideration of the subject was summed up as follows:

1. Syphilis is a constitutional infectious disease of which the first outward manifestation is the chancre, initial lesion, or initial sclerosis at the site of entrance of the virus.

2. While this primary lesion commonly presents points by which it may be recognized, in other instances it is very difficult to speak with positiveness from the local lesion alone, and, therefore, cases presenting only local signs must, as a rule, be excluded from any consideration of syphilis as regards the pathological tendencies of the disease.

3. In a certain proportion of cases constitutional syphilis is a mild affection, even as other infectious diseases occur, with varying severity under different conditions.

4. The causes of the differences observed in certain cases of syphilis are as yet unknown. Individual constitution, surrounding circumstances, the discharge of the virus received, proper treatment, and possibly partial protection through hereditary influence of the disease, are elements of importance in every case.

5. No definite prognosis can be made from the character of the initial lesion of syphilis, as to the progress of the disease if left untreated. Cases which at the beginning seemed insignificant, have in later years proved most serious, while, in many instances of late lesions of syphilis, no satisfactory history at all can be obtained in regard to the initial sore, it having been so slight, or so concealed, as to have escaped notice.

6. In view of the very severe and extensive manner in which syphilis may at some time during its course affect any or all of the tissues of the body, and the destructive pathological tendencies of the disease under

favoring conditions, syphilis cannot properly be spoken of as a benign disease, although certain cases may, under suitable circumstances, run a very mild course.

SECOND DAY.—EVENING SESSION.

Dr. ABRAHAM JACOBI, President of the Society, delivered the

ANNIVERSARY ADDRESS,

taking for his subject "Infant Feeding, and Infant Foods," after which the Society sat down to its Annual Dinner at the Delavan House.

THURSDAY, FEB. 9.—THIRD DAY—FINAL SESSION.

After prayer, the Society proceeded to the consideration of

MISCELLANEOUS BUSINESS.

Communications were received from County Societies.

The resolution from the Otsego County Society, to relieve certain permanent members from paying dues, on recommendation of County Societies, was referred to the Committee on By-Laws.

The special Committee on the President's Address (Drs. E. M. Moore, S. O. Vanderpoel, Wm. C. Wey, and J. P. Gray) offered resolutions favoring erection of special hospitals for contagious diseases of children. Also, that the conferring of the title of Doctor of Medicine should be by medical colleges only, after the examination and recommendation of an independent Board of Examiners, which Board shall be common to all the colleges.

The Publication Committee was authorized to publish the Transactions at their discretion.

The Committee to act in conjunction with the Society to Prevent Cruelty to Children was continued, and Dr. C. R. Agnew was added in place of the late Dr. Jas. P. White.

Dr. AUSTIN FLINT offered the following resolution:

Whereas, Efforts have recently been made in this country to excite in the minds of ignorant people a prejudice against vaccination,

Resolved, That this matter be referred to the Committee on Experimental Medicine, and that this Committee be empowered to take such measures as may seem to its members requisite for the protection of the public health.

Adopted, and Dr. Flint was added to the Committee.

Dr. JOHN P. GRAY, of Utica, moved, that in view of the important relations of the medical profession to the administration of justice, the time has arrived when the faculty should declare its opinion upon the proper functions and limits of medical-expert testimony, therefore,

Resolved, That the true function of the medical expert is to expound and interpret the results of the pathological conditions, and that in the absence of disease he is not justified in drawing conclusions as to civil responsibility from moral manifestations of conduct, that department belonging exclusively to law.

Unanimously adopted.

By resolution, Dr. Gray was requested to prepare a paper on this subject for the next meeting.

The following papers were read by title:

On Inflammation of the Shoulder-joint, Resulting from Hemiplegia, by Dr. L. E. FELTON, of St. Lawrence County.

Report of a Case of Molluscum Fibrosum, by GEORGE G. HOPKINS, M.D., of Brooklyn.

The Early Diagnosis of Pott's Disease, by V. P. GIBNEY, M.D., of New York.

The Significance of Pain Referred to the Ear, by Dr. D. B. ST. JOHN ROOSA, of New York (see page 152).

Cases of Glaucoma, in which Iridectomy on one Eye seemed to Precipitate an Attack of Acute Glaucoma in the Fellow Eye, by Dr. D. WEBSTER, of New York.

A Few Original Thoughts on Cholera, by H. RAYMOND ROGERS, M.D., of Dunkirk.

And *Facial Paralysis occurring in Connection with Aural Disease*, by S. SEXTON, M.D., of New York.

Dr. D. H. GOODWILLIE, of New York, read a paper on *Application by Insufflation of Medicated Powders to the Upper Air-Passages, for the Relief of Catarrhal Conditions*, which was referred to the Publication Committee.

Dr. E. H. M. SELL, of New York, read a paper

ON THE USE OF AVENA SATIVA,

in which he recommended the use of concentrated tincture of avena sativa or maltine, as a nerve stimulant and general tonic in the neuroses. The concentrated tincture is invaluable as an antidote to the opium habit, and he reported several striking cases which were cured by it.

Dr. SQUIBB offered a resolution that writers of papers for the future sessions of the Society, either limit their papers to twenty minutes, or prepare an abstract for reading, and that any motion to extend the prescribed time shall not be in order. Adopted.

THE MEDICAL SOCIETY OF THE COUNTY OF NEW YORK offered a communication pointing out defects in the medical law of 1880, and asking that appropriate amendments, or a new bill be recommended to the Legislature, so as to define clearly what is meant by a practitioner of medicine, and second, to prescribe a penalty for perjury in registration; as the present law is inoperative against magnetic physicians. These points were embraced in resolutions, which were adopted.

Drafts of bills from the Committee on Legislation were approved and recommitted.

THE REPORT OF THE COMMITTEE ON NOMINATIONS, as follows, was presented and adopted:

President.—Harvey Jewett, M.D., of Canandaigua.

Vice-President.—E. D. Ferguson, M.D., of Troy.

Secretary.—Wm. Manlius Smith, M.D., of Syracuse.

Treasurer.—Charles H. Porter, M.D., of Albany.

Chairman of Committee of Arrangements.—S. B. Ward, M.D., of Albany.

Honorary Members.—Drs. Roberts Bartholow, of Philadelphia; Sidney Ringer, of London; Charles M. Ewing, of New York.

Eligible for Honorary Membership.—Drs. Theodore G. Wormley and William Goodell, of Philadelphia.

After a short farewell address by the President and the usual vote of thanks, the Society adjourned to meet at Albany, on the first Tuesday in February, 1883.

CORRESPONDENCE.

MEMPHIS—ITS SEWERS AND ITS HEALTH.

To the Editor of the MEDICAL NEWS:

A statement has been going the rounds of the newspapers, that the mortality of Memphis has increased since the introduction of the Waring System of Sewerage. This statement would seem to imply that the sewers have, to say the least, been a factor in the increased death-rate.

It may be said that a problem is being worked out here, in which our community especially, and sanitarians generally, are deeply concerned, and as this question is one of public interest, I propose to state, briefly, the facts as far as I am acquainted with them.

This system of sewerage was inaugurated by the laying of pipe, January 20, 1880. House connections were begun March 1, 1880. On July 1, of the same year, twenty miles of sewer had been laid. The system was practically completed, July 1, 1881, when thirty-four miles of sewer-pipe had been laid, and 3579 water-closets had been connected with it.

It will appear from these data, that during the year 1880, the sewers were in operation to a limited extent, and only during the latter part of the year; while they were in full operation during most of the year 1881.

It is proposed to compare the mortality for 1881 with that of 1880. No allusion is made to 1879 and 1878, because they were epidemic years.

The total mortality for 1880 was 1054; for 1881 it was 1276. This increase of mortality was distributed quite evenly through the year. During the last quarter of 1881 the mortality was a little less than for 1880, being 272 against 279 for the same quarter of the year previous.

The increased mortality for 1881 was observed in both the white and the colored races, except for the last quarter of 1881, when the death-rate among the whites was less, and among the blacks was greater than for the corresponding quarter of 1880.

The deaths from zymotic diseases generally were 274 for 1880, and 320 for 1881.

The mortality from all the forms of malarial fevers, including typho-malarial, was nearly the same for each year, being 101 for 1880, and 99 for 1881.

The number of deaths from typhoid fever was 17 for each year. Dysentery destroyed 70 lives in 1881; only 45 in 1880. Diphtheria, 43 in 1881; only 12 in 1880. Consumption carried off 168 in 1881, and 157 in 1880. Acute diseases of the respiratory organs destroyed 102 in 1880, and 124 in 1881.

It is generally conceded that the operation of the sewers has been eminently satisfactory. There is no ground for the complaint of sewer-gas in dwellings, and the pipes are believed to be comparatively free from it.

To July 1, 1881, it had been found necessary to cleanse a portion of the mains, of deposits, only twice; and the laterals not at all. To the same date, only twenty-one cases of obstruction by sticks, rags, etc., had occurred in the six-inch pipes, and these had been removed at an average cost of $15 each.

The only defect in the works yet discovered, has arisen from an error of calculation. It is, that the two fifteen-inch mains, running parallel to the bayou, are too small to carry off readily the sewage from the laterals. As a temporary means of relief to these mains, there have been established at five points overflows into the bayou.

I cannot see how the system of sewers can in any way be held responsible for the increased mortality of 1881. By this system we have been relieved of the great evil of soil-pollution; but it would seem that something else than sewers is necessary to make the health of this city what it should be. What this is remains to be discovered.

It must be remembered that one feature of the Waring system is soil-drainage. This it accomplishes but to a very limited extent, because here the network of pipes encloses no areas less than three hundred feet square, and in many portions of the city, much larger areas are dependent upon these pipes for drainage. Furthermore, the drain-pipes, which lie alongside the sewer-pipes, are, in very many places, twelve feet and more below the surface; and, as the soil contains much clay and is very retentive of moisture, these drains exert no influence in the way of drying the surface soil.

My belief is, though I have been able to obtain no mathematical data, that the general level of the subsoil water has not been materially lowered by the sewer system here; and, in the light of past observations upon this point, in other localities, *we may not reasonably look for much reduction in our death-rate until our drainage is radically improved.*

The water-supply of this city is objectionable upon two grounds:

1. It requires filtering to make it suitable for cooking, washing, or drinking, and this is impracticable for the largest portion of the population.

2. The source from which the water is obtained is open to contamination, through the influence of back-water at certain times, from the drainage of slaughter-houses, stockyards, and sewers.

The investigations of Major Benyard (United States Engineer Corps), made for several months past, and still being carried on, show that when the Mississippi is high, and Wolf River low, a current sets in below the mouth of the present outlet of the city sewers, and carries the water from this locality, as well as that which is polluted by the outflow from Bloody Bayou and Bayou Gayoso, above the point at which the city supply is taken.

The influence of such water as this upon the public health, must, of necessity, be prejudicial. The water company who have recently come into possession of the works, seem determined to remove all objectionable features, and I have no doubt will ultimately give the city good water.

Memphis has an honest and intelligent government, and an energetic and faithful Health Board, who are doing everything in their power to make the city what it ought to be, from a sanitary as well as a commercial standpoint. But Rome was not built in a day!

To Dr. G. B. Thornton, President of the Board of Health, I am indebted for free access to all the records of his office, and for much information pertaining to this subject.

Yours, respectfully,
R. B. MAURY, M.D.

MEMPHIS, TENN., January 24, 1882.

NEWS ITEMS.

ALBANY.

(*From our Special Correspondent.*)

MEETING OF NEW YORK STATE MEDICAL SOCIETY.—In spite of the snow blockade that has interrupted travel to some extent throughout the State, the annual meeting of the Medical Society of the State of New York was held at Albany, convening on Tuesday, the 7th inst., according to appointment, and a large and unusually active meeting was held. New York City was well represented by the President of the Society, Dr. Abraham Jacobi, and by Drs. Vanderpoel, Agnew, Elsberg, Bulkley, Piffard, Roosa, Squibb, Seguin, Gibney, Bull, Sturgis, Rockwell, and others, while from the State perhaps a larger number were present than at any previous meeting. Drs. Moore and Ely, of Rochester; Potter and Roe, of Elmira; W. Manlius Smith, Felton, and many other prominent members of the profession in the State were also noticed to take an active part in the proceedings.

The interest of the session, apart from the scientific work, centred especially around two proposed measures, involving the general and political interests of the practitioner. The first was a new code of ethics; the second, new legislation regulating the right to practise. The first had been referred to a committee at the last meeting, whose report was now presented, and by direction of the Business Committee and the vote of the Society it was made the special order for discussion upon Tuesday evening. The question was one which deeply interested the members, inasmuch as it warranted consultations with irregulars. While the New York City delegation were almost entirely in favor of such a radical change, the State members were opposed to it. A motion offered by Dr. Roosa, of New York, as a substitute for the report, nearly succeeded in passing, although in effect it entirely threw overboard all codes of ethics, and left the subject to each individual prac-

titioner to decide for himself. It was only prevented from being adopted by the decision of the President, that being in effect an amendment to the By-laws, it required a two-thirds vote. There were thirty-nine votes in favor of it, and thirty-seven against it.

This motion is especially noticeable, as it received the endorsement of a majority of the members voting. It is also significant as showing the attitude of the profession in New York to the Code of Ethics of the American Medical Association.

The report of the Committee on Ethics, which was finally adopted, not only amends the Constitution of the Society, but clearly dissolves the connection of the New York State Medical Society with the American Medical Association. The attention of the members was called to this fact, but by a two-thirds vote the measure was carried; a step which will probably again cause discussion when the delegates from the Society present their credentials next June, at St. Paul, at the meeting of the National Association.

The proposed legislation called for by the communication from the New York County Medical Society, contemplated not only compulsory registration, but also the divorcing of the diploma and the license to practise, confining the right to grant the latter to a State Examining Board. It was intended to pass this at this meeting, in order to allow it to receive the endorsement of the Society at once, and to push it through at the present session of the Legislature. The act is expected to become a law within twenty days after its passage. The principles of this bill are set forth substantially in a communication from Dr. Sturgis, whose conclusions are given in another column. Whether due solely to the knowledge that these important measures were coming up for discussion or not, the fact remains that the present is one of the largest and most successful gatherings of the profession of this State that has ever been held.

The papers read were numerous, and, necessarily, brief; quite a number of them were abruptly cut off by the twenty-minute rule adopted on the first day, on recommendation of the Business Committee. The programmes for each session were only to be obtained at the commencement of the exercises, two programmes being issued daily. This method is decidedly inferior to the old plan of providing a complete programme on the first day, which gave the members in advance an idea of the time when papers interesting to them would be presented. The plan adopted is almost equivalent to neglecting to provide any programme at all.

The address of Dr. Jacobi, at the Capitol, on the evening of the second day, was on the subject of the various infant foods now offered by dealers, and the defects and inefficiency of most of them were pointedly considered and condemned.

The report of the Nominating Committee gives general satisfaction.

WASHINGTON.

(*From our Special Correspondent.*)

SMALL-POX IN THE DISTRICT OF COLUMBIA.—While small-pox has been so rife over nearly the whole country during the past winter, this District has been singularly favored. Only one death occurred from the disease during the year 1881, and that was in December. Since that time six cases have been developed, all from the first case, so that Washington is to be credited, up to this date, with only seven cases in all.

Nevertheless, vaccination and revaccination have been vigorously practised, both by the health authorities, by the physicians to the poor, and by private physicians. One of the regulations of the public schools is, that all children must produce certificates of vaccination before they can be admitted.

The National Board of Health have recently issued a circular letter to the heads of Government departments, recommending "that prompt measures be taken for securing, as far as may be practicable, the vaccination or revaccination of all the employés of the Government," and the Secretaries of the Treasury and Interior, and the Postmaster-General have already called the attention of their employés to the necessity of complying with this recommendation.

It is quite a relief to the people of the District of Columbia to feel that they have something to boast of in exemption from small-pox, after the serious misrepresentations that have gone abroad on the subject of "Washington malaria."

SMALL-POX.—The mortality returns for the week ending February 4, give the following number of deaths from small-pox: New York, 20; Philadelphia, 12; Boston, 1; Allegheny, 17; Erie, 1; Montclair, N. J., 1; Richmond, 12; Norfolk, 1; Dayton, 10; East Liverpool, O., 1; Indianapolis, 1; Louisville, 1; Chattanooga, 1; Milwaukee, 4.

For the week ending January 28, there were 9 deaths in Hudson County, N. J., 1 in San Francisco, 4 in New Orleans, and 1 in Holyoke, Mass.

On the 6th inst. there were 14 new cases and 6 deaths, and on the 7th, 6 cases and 2 deaths, from the disease in Chicago; and during last week 18 new cases in Richmond.

HEALTH IN MICHIGAN.—For the week ending January 28, 1882, the reports indicate that bronchitis and influenza have increased, and that tonsilitis, membranous croup, typho-malarial fever, remittent fever, and diphtheria have considerable decreased, in area of prevalence.

Cases of small-pox are reported as follows: in Crystal Lake township, Benzie Co., January 7; in Prairie Ronde, Kalamazoo Co., January 24; in Port Huron township, January 24; in Watson township, Allegan Co. (1 case), January 26; in Pontiac township (4 cases derived from a tramp), January 28; at the villages of Menominee (2 cases), Waucodah (3 cases), and Spalding (3 cases), in Menominee Co., January 28; at Bay City (convalescents), January 28; at Escanaba, Delta Co., January 28; at Detroit, January 28; at Grand Rapids (convalescents), January 31; and in Park township (brought from Leesburg), St. Joseph Co., February 2, 1882.

LEPROSY IN MINNEAPOLIS.—We are informed that a leper, aged twenty-six, died at Minneapolis, on February 1. The disease first manifested itself upon his arrival in this country, six years ago, and during this time he has endured great suffering.

VACCINATION OF EMPLOYÉS, ETC.—The Louisville and Nashville and Short Line Railroad Companies have followed the example of the Pennsylvania Company, in requiring a certificate of vaccination from its employés. The contagion of this exemplary act we hope may outrun the small-pox.

In a letter to the Postmaster-General, the President of the National Board of Health strongly recommends the vaccination or revaccination of all persons employed in the Government departments.

An ordinance has been published by the City Councils of Richmond, Va., compelling the vaccination of all persons who have not been vaccinated within twelve months, except in cases where any regularly licensed physician shall declare it to be injurious or

unnecessary. Any person refusing to be vaccinated, or to allow his or her child, children, or wards to be vaccinated within fifteen days after the passage of this ordinance, is liable to a fine of five dollars.

OBLIGATORY VACCINATION IN SWITZERLAND.—During the passage of a new law on epidemics, the Swiss National Council (*Gaz. Hebd.*, January 1), adopted by ninety votes against twenty-three the principle of obligatory vaccination. Every infant born in Switzerland must, according to this law, be vaccinated during the first year of its life, or at latest during its second year; and infants born out of Switzerland, if not previously vaccinated, must submit to the same rule. No child can be permitted to frequent a public or private school without a certificate of vaccination.—*Med. Times and Gaz.*, Jan. 14, 1882.

DISINFECTION OF CLINICAL THERMOMETERS.—In a letter to the *Lancet*, January 14, 1882, Dr. HASSALL draws attention to the importance of thoroughly disinfecting clinical thermometers after use, by washing them in a solution of permanganate of potash or carbolic acid, so as to avoid any danger of transferring contagious diseases from one patient to another.

ADULTERATION OF FOOD AND DRUGS BILL.—A bill has just been presented in Congress to prevent the adulteration of food and drugs. According to its provisions an article is adulterated:

a. In the case of drugs:

First. If, when sold under or by a name recognized in the United States Pharmacopœia, it differs from the standard of strength, quality, or purity laid down therein.

Second. If, when sold under or by a name not recognized in the United States Pharmacopœia, but which is found in some other pharmacopœia, or other standard work on materia medica, it differs materially from the standard of strength, quality, or purity laid down in such work.

Third. If its strength or purity fall below the professed standard under which it is sold.

b. In the case of food or drink:

First. If any substance or substances has or have been mixed with it so as to reduce or lower or injuriously affect its quality or strength.

Second. If any inferior or cheaper substance or substances have been substituted wholly or in part for the article.

Third. If any valuable constituent of the article has been wholly or in part abstracted.

Fourth. If it be an imitation of, or be sold under the name of another article.

Fifth. If it consist wholly or in part of a diseased, or decomposed, or putrid, or rotten animal or vegetable substance, whether manufactured or not, or, in the case of milk, if it is the produce of a diseased animal.

Sixth. If it be colored or coated, or polished or powdered, whereby damage is concealed, or it is made to appear better than it really is, or of greater value.

Seventh. If it contain any added poisonous ingredient, or any ingredient which may render such article injurious to the health of a person consuming it: *Provided*, That the National Board of Health may, with the approval of the Secretary of the Treasury, from time to time declare certain articles or preparations to be exempt from the provisions of this act; *and provided further*, That the provisions of this act shall not apply to mixtures or compounds recognized as ordinary articles of food, provided that the same are not injurious to health, and that the articles are distinctly labelled as a mixture, stating the components of the mixture.

Section 5 further provides, "That, in order to carry into effect the provisions of this act, the Secretary of the Treasury is hereby authorized to appoint, from names submitted to him for that purpose by the National Board of Health, one or more suitably qualified persons as special inspectors, and as public analysts for adulterated food and drugs at such ports of entry as the Secretary of the Treasury may deem expedient; and it shall be the duty of the National Board of Health to prepare instructions governing the work of such inspectors and analysts, which, when approved by the Secretary of the Treasury, shall govern their action, and that of collectors of customs, in preventing importation from foreign countries of food or drugs adulterated within the meaning of this act."

THE RED CROSS SOCIETY.—The International Committee of the Red Cross Society of Geneva has decided to offer for public competition three prizes of 2000 francs each, with second prizes to the amount of 500 francs. The subjects of the three essays are: 1. On Improvising the means of Treatment of Wounded and Sick. 2. On Improvising the means of Transport. 3. On Improvising an Ambulance or Field Hospital. The object sought is to obtain by the union of the three a complete work on the art of improvising the means of assistance for wounded and sick. The committee is desirous of grouping methodically all available information as to the measures by which the three important branches of treatment, transport, and ambulance may be best extemporized in cases where special provision has not been made beforehand for them. Details are given of the various matters grouped under these three headings in the circular issued by the committee, to which we must refer those interested in the subject. The essays may be in French, German, or English. They must reach the President of the International Committee, Rue de l'Athénée, 8, Geneva, Switzerland, before April 1, 1883; each essay must bear a motto, and be accompanied by a sealed note containing the name of the author. The committee reserve the right of withholding any of the prizes, should the essays appear to the jury appointed to examine them not to possess sufficient merit. The jury will be composed of members of different nationalities. If prizes are awarded, the essays are to be the property of the Society, under the condition of being published by it within a year from the date of the award of the jury.—*Lancet*, Dec. 31, 1881.

HOW TO AID INJURED PERSONS.—Gen. McClellan has accepted the chairmanship of the committee recently formed in New York, whose purpose is to teach persons of all classes how to give first aid to the sick and injured, pending the arrival of a physician or surgeon, and to give instruction in nursing and in the laws of health. A large number of physicians have already volunteered their services in giving the needed instruction, and eighteen classes have been formed. Similar work has been in successful operation in London for nearly five years, under the auspices of the Society of St. John, of Jerusalem. The importance of this, the newest phase of New York's philanthropy, in supplying such instruction to the police, firemen, railway employés, workmen in factories, and, in fact, to all classes, must be generally appreciated and approved by the public and medical profession. We trust to hear soon of other cities following New York's example.

REMOVAL OF THE ENTIRE UTERUS.—On January 3, Sir WILLIAM MACCORMAC removed the entire uterus, on account of epithelial cancer of the cervix, in a woman, aged thirty-four, who had been admitted into St. Thomas's Hospital, under Dr. Ord's care, with serious intestinal obstruction. An incision was first made

through the abdominal parietes from the umbilicus to the pubes. It was then found that the cavity of the pelvis was completely filled by a tense, thick-walled cyst, which flattened the rectum against the sacrum, and was the cause of previous severe obstruction. The uterus and its appendages were at first completely concealed by the tumor; and until it was evacuated, no room could be obtained to perform the necessary manipulations. The cyst, which afterwards proved to be ovarian, contained very offensive pus, and it was impossible to prevent partial escape of its contents into the peritoneal cavity. On the cyst being partially emptied, it was separated from the almost universal adhesions it had contracted, and removed along with the uterus. On the completion of the operation, the large double-barrelled T-shaped drainage-tube recommended by Bardenheuer was inserted, and the two ends projecting from the vagina were utilized for frequent irrigation. No attempt was made to suture the pelvic outlet. The abdominal wound was closed in the usual manner. On the fifth day, there was evidence of some suppuration opposite the lower part of the wound, which was therefore reopened. Some pus escaped, and the cavity was washed out. The temperature, which had risen to 102.6°, fell soon afterwards; and the patient is now (ten days after the operation) making rapid progress towards recovery. Eucalyptol was the antiseptic agent employed for irrigating, as well as for the spray and external antiseptic dressings.—*British Med. Journ.*, Jan. 14, 1882.

PURITY OF ICE.—The New York papers have lately been agitating the question of conveyance of disease by ice. The *World* recently interviewed Dr. S. O. Vanderpoel, formerly Health Officer of New York, who, in reply to the inquiries propounded by its reporter, said: "I have no doubt that disease can be disseminated just as well by ice as by water. If I am not mistaken, some time ago certain ice formed from pond water near Boston was suspected to have caused sickness, and when the ice was examined it was found to contain numbers of impurities. I do not believe that freezing forces out foreign substances, and the assertion that disease-germs are expelled cannot be sustained, because these germs cannot be isolated so as to be examined microscopically. I think a distinction should be drawn between miasma and malaria. The first properly belongs to animal germs, and the other to vegetable. Now these animal germs are effectually destroyed by oxidization when exposed to the air, and is the reason why in rivers or in large lakes where no sewage enters the water the ice from it may be used with impunity."

THE JOURNAL OF NERVOUS AND MENTAL DISEASES.—Messrs. G. P. Putnam's Sons writes to us, requesting us to state that the report that this journal has been "sold out" or discontinued, which has obtained currency in some periodicals, is without foundation.

SHALL WOMEN PRACTISE MEDICINE?—Mrs. Mary Putnam Jacobi, in an article in the *North American Review*, ably discusses this subject, and declares that "the profession of medicine must be chosen deliberately, and not at hap-hazard, from a strong and genuine taste, and not from the mere pressure of economic necessity; it must be seriously prepared for in youth; must be entered upon at the age at which at present many women marry; may not yield its best returns until full maturity has been reached; must be adopted, therefore, if at all, for a lifetime. Hence is required either an accidental celibacy or a deliberate renunciation of marriage for the sake of medicine, such as is not dreamed of in regard to any other work; or else such an adjustment of domestic claims as shall render them and the practice of medicine by married women mutually compatible."

A SPANISH HOSPITAL IN PARIS.—The *Siglo Medico*, of Madrid, states that steps will shortly be taken to open a hospital in Paris, for the relief of necessitous Spaniards. The Spanish colony in that city already exceeds thirty thousand, many of whom are in indigent circumstances, and dependent entirely, in case of sickness, on public benevolence. The new hospital will owe its inception mainly to Duke Fernan-Nuñez, the Spanish ambassador, and will be modelled, as far as possible, on the plan of the French Hospital at Madrid.—*British Med. Journ.*, Jan. 14, 1882.

A GENEROUS GIFT.—Dr. G. S. B. Hempstead, a member of the Scioto County (O.) Medical Society, has donated his large library to the Society.

PERSONAL.—The London *Graphic*, of January 21, contains an excellent likeness of the late Dr. John W. Draper, New York.

BEQUEST TO DARTMOUTH MEDICAL COLLEGE.—Mr. Edwin W. Stoughton by his will, which was admitted to probate on the 1st inst., gives $2000 to Dartmouth Medical College, for its Pathological Museum.

DIED.—On January 8, 1882, JOHN FLINT SOUTH, F.R.C.S., in the eighty-fifth year of his age. Mr. South is best known as the translator of Chelius' *System of Surgery*, to which he added numerous valuable original notes.

It was largely through the energy of Mr. South, that the remains of John Hunter were interred in Westminster Abbey, the epitaph being from his pen.

NOTES AND QUERIES.

A COMMON MISTAKE OF DRUGGISTS.

A CORRESPONDENT writes us that again and again he has sent patients to drug-stores to obtain "India-rubber tissue," or "pure thin sheet rubber," for covering poultices and such like uses; and nearly always he finds them sending "gutta-percha tissue" or India-rubber cloth. "The former tears easily, curls up and becomes useless at the temperature of a properly made poultice, and is unsuitable for medical purposes; the latter being made partly of cloth, absorbs discharges and quickly becomes foul. Apparently our friends of the pill and the pestle do not know what 'India-rubber tissue,' or 'bandage rubber,' as we believe it is technically known to the trade, really is."

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT, U. S. ARMY, FROM JANUARY 31, TO FEBRUARY 6, 1882.

SUMMERS, J. E., *Lieutenant-Colonel and Surgeon.*—Medical Director Department of the Platte. Leave of absence further extended one month.—*S. O. 20, C. S., A. G. O.*

WOODWARD, JOSEPH J., *Major and Surgeon.*—Granted leave of absence for six months on Surgeon's certificate of disability, with permission to go beyond sea.—*S. O. 23, A. G. O., January 30, 1882.*

WOODHULL, A. A., *Major and Surgeon.*—The leave of absence granted him in S. O. 227, A. G. O., 1881, is extended one month and ten days.—*S. O. 27, A. G. O., February 3, 1882.*

THE MEDICAL NEWS *will be pleased to receive early intelligence of local events of general medical interest, or which it is desirable to bring to the notice of the profession.*

Local papers containing reports or news items should be marked.

Letters, whether written for publication or private information, must be authenticated by the names and addresses of their writers—of course not necessarily for publication.

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